

**THE SOCIO-CULTURAL CONTEXT OF MATERNAL HEALTH IN  
LAGOS STATE, NIGERIA**

**By**

**ADENIKE ESTHER IDOWU**

**(MATRIC NO.: CU032120026)**

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## **CERTIFICATION**

This is to certify that this research was carried out by Adenike Esther Idowu of the Department Sociology, School of Human Resource Development, College of Development Studies, Covenant University, Canaanland, Ota, Ogun State, under our supervision and that the thesis has not been submitted for the award of any Degree in this or any other university.

Dr. P. A. Edewor  
Sub-Dean, School of Human Resource  
College of Development Studies  
Covenant University, Ota.

-----  
Supervisor

Prof. A. Ogundipe

-----  
Co-Supervisor

Dr. H. O. Abimbola  
Department of Sociology  
Covenant University, Ota.

-----  
Head of Department

.....  
Dr. H. O. Abimbola  
Head, Department of Sociology

.....  
Prof. I. O. Ogunrinola  
Dean, College of Development Studies

## **DEDICATION**

This thesis is dedicated to the Almighty God, whose infinite mercies and favour saw me through, and also to the evergreen memory of my late parents Dr. & Mrs. N. F. Idowu, whose tireless efforts provided me with an opportunity to pursue my academics. May their loving souls continue to rest at the bosom of the Almighty God. To my spiritual parents, Bishop David and Pst. (Mrs.) Faith Oyedepo, whose spiritual virtues were a driving light throughout this study.

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Idowu, Adenike Esther

Department of Sociology

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## **ABSTRACT**

Maternal health is one of the major concerns of the global health community. Pregnancy-related mortality is avoidable if preventive measures are taken and adequate care is available. Yet women in sub-Saharan Africa continue to die due to pregnancy-related complications. This study set out to examine the socio-cultural context of pregnant women and how that context precipitates maternal morbidity and mortality. The study was prompted by the high rate of maternal death despite all efforts and the observation that studies had concentrated on the proximate determinants of maternal mortality, rather than also considering the social determinants. Five objectives were considered which were to: identify the social factors that precipitate the medical proximate determinants of maternal health, determine the cultural beliefs and stereotypes that are associated with maternal health, examine how role conflict influences maternal health, investigate how mothers' working conditions affect maternal health, and evaluate how social support influence maternal health. Systematic review of literature was carried out while the study utilized Functionalism, Agency Structure Theory and Gender and Development (GAD) Theory for its theoretical framework. The study was conducted in the four selected Local Government Areas (LGAs) of Lagos State from November, 2011 to January, 2012 using 1,362 respondents to whom a structured questionnaire was administered, 20 key informants were interviewed and 4 case studies were analysed. Five hypotheses were tested. The first hypothesis revealed age, education, occupation, income, religion, marital status and type of marriage are significant determinants of maternal health complications. Women in age group 20-24, 25-29 and 30-34 are 0.631, 0.621 and 0.756 respectively less likely to have health complications. The second hypothesis estimated significant influence of cultural beliefs and practices on maternal health. With p-values 0.021, 0.001, 0.050 and 0.011 respectively, women who experience swollen feet, dizziness, fatigue or more than one of these symptoms are more likely to be at risk of complication. The third hypothesis also indicated a significant influence of role conflict on maternal health. Women's working conditions were found to significantly influence maternal health complications in the fourth hypothesis. And the finding of the fifth hypothesis revealed that there is a significant influence of social support available to women on maternal health. The findings presented in this study show that maternal health

challenges will continue to shape national indicators on health, poverty, and other development issues, if adequate attention is not provided. The study suggests that to reduce maternal morbidity and mortality, intervention programmes must be introduced to deal with maternal health in a broad and multidimensional way. Every effort must be put in place to reduce poverty and enhance infrastructural development. Health promotion and education should be widely recognized and should be embarked upon as necessary primary approaches to ensure maternal health. Health policies toward maternal wellbeing during pregnancy in the place of work should be developed in the light of urban poor infrastructure. There must be a strong political will to help in the process of reducing maternal mortality in Nigeria.

Keywords: Socio-cultural, Maternal health, Complications, Lagos.

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## **LIST OF ABBREVIATIONS**

EOC	Emergency Obstetric Care
HEFAAMA	Lagos State Health Facility Monitoring and Accreditation Agency
HDR	Human Development Report
ICD	International Classification of Diseases
ICM	International Conference of Midwives
ICRW	International Centre for Research on Women
MMR	Maternal Mortality Rate
NDHS	Nigeria Demographic and Health Survey
NPCN	National Population Commission Nigeria
PHC	Primary Health Care
TBA	Traditional Birth Attendant
UN	United Nations
UNDP	United Nations Development Programme



UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children Fund
USAID	United States Agency for International Development
WHO	World Health Organization

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background to the study**

The growing concern on improving reproductive health in the global south has created a demand for research especially in the area of maternal health. Maternal health, which is the physical well being of a woman during pregnancy, childbirth, and postpartum period (WHO, 2011; Fadeyi, 2007), has been a major concern of several international summits and conferences since the late 1980s, which culminated to the Millennium Summit in 2000 (WHO, 2007). At that summit, it was generally agreed that maternal health care has a crucial role to play in the improvement of reproductive health and that women deserve to be well informed and empowered to have unhindered access to safe, effective, affordable, acceptable and appropriate health care service. These will enable them to go safely through pregnancy and child birth and provide couples with the best chance of having healthy infants (United Nations, 1996).

While motherhood is often a positive and fulfilling experience, for too many women in sub-Saharan Africa, it is associated with suffering, ill-health and even death. More pathetic is the fact that, pregnancy-related complications are avoidable if appropriate measures are taken and adequate care is available (WHO, 2011; Idris, 2010). Yet more than half a million women die annually due to pregnancy related complications with 95% of these coming from the developing world (UNICEF, 2008). For this reason among others, maternal health deserves attention because pregnancy involves normal, life-enhancing process of procreation which carries a high risk of death. This process of women's reproduction has been socially constructed by medical sciences as "pathological" "abnormal" and "unnatural" or at least in need of continual monitoring (Fausto and Sterling, 1992; Riessman, 1983; Zita, 1997; in Dillaway, 2005). The mother's body goes through a lot of physiological, anatomical and psychological metamorphosis that need to be handled properly in order to reduce morbidity, and mortality rates (Hunter, 1994).

In the literature, there is the indication that women encounter challenges in their attempts to ensure good health but sadly they still die due to pregnancy-related causes. Many strategies by Non Governmental Organizations (NGOs), government health ministries and international organizations such as WHO, have been adopted in an attempt to improve maternal health outcomes around the world through the provision of maternal and child health (MCH) programmes, aimed at improving primary prevention through education and services, early detection and treatment. Specific programme interventions include emphasizing prenatal attention, clean and safe deliveries, postnatal care, family planning, and essential obstetric care (Fadeyi, 2007; Lubbock and Stephen, 2008). While these programmes encourage women's access to maternal health services, women continue to be susceptible to health complications due to some extraneous social and cultural factors.

Furthermore, an MCH approach has often focused on medical and facility-based interventions, whereas the issues involved in maternal health also include social, cultural, economic, legal and even religious factors, which equally need to be addressed for any meaningful improvement in maternal health (HERFON, 2006). Consequently, safe motherhood which eludes many women due to inadequate knowledge about reproductive health is complicated by unmitigated socio-cultural and economic backgrounds of women (Okemgbo, Kutey, and Odimegwu, 2002) such as poverty, high risk social environment, inconsiderate working policies as well as role conflicts that lead to both emotional and physical stress which ultimately induce complications during pregnancy. This scenario seems to explain why several women lose their lives daily as a result of pregnancy-related complications (WHO, 2008).

From the foregoing, it is obvious that maternal morbidity and mortality are key constituents of maternal health. The World Health Organization in the international statistical classification of diseases and related health problems (ICD), has defined maternal mortality as "the death of a woman while pregnant or within 42 days of a termination of a pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from

accidental and incidental causes” (WHO 2007; Ogunjuyigbe and Liasu, 2007; Khama, *et.al.*, 2006). It is within this conceptual framework that the Millennium Development Goal Target 5A calls for a reduction in maternal mortality ratio by three-quarters by 2015. At its present rate, however, the world will fall short of the target for maternal mortality reduction because the data so far collated suggest that to reach the target the global Maternal Mortality Rate (MMR) would have had to be reduced by an average of 5.5% a year between 1990 and 2015. The current average rate of reduction is less than 1% a year. The estimated 0.1% annual rate of reduction in sub-Saharan Africa, where levels of mortality are highest, is slower than what obtains in other regions (UNICEF, 2008). This is further compounded by the region’s poor economic base and internal wars.

Although Nigerian constitutes only two percent of the world’s population, Nigeria accounts for over 10% of the world’s maternal deaths, and ranks second globally only to India (Okonofua, 2007; Abdul’Aziz, 2008). The status of maternal health is poor in Nigeria, defined by maternal mortality of 59,000 per annum due to pregnancy-related causes. This has been identified as the leading cause of death among women of reproductive age in Nigeria (Idris, 2010).

Reducing maternal health complications was one of the critical issues which received attention at the Beijing conference on women development in 1995 (Kaba and Dagnachew, 2001; Lule *et.al* 2005; Daily Independent, 2010). Unfortunately, the Beijing declaration has not been fully implemented in Nigeria despite its poor record of maternal health as many women still die prematurely or suffer debilitating ill-health from reproductive processes which are, to a large extent, preventable (Alubo, 2010).

Consequently, it will be reasonable to submit that the reduction of maternal mortality and morbidity requires a multifaceted approach that includes addressing both medical and social risk factors associated with increasing susceptibility among women. Complications just do not appear in a day as a challenge, they are as a result of constellation of many precautions that ought to have been in place before and during

pregnancy. Availability of health care service is only one component necessary for safe pregnancy. There are other militating factors against healthy pregnancy that need to be considered to ensure maternal health and to prevent maternal complications. The issue of maternal mortality in Nigeria has been adduced to both medical and social factors and it is believed that the way to take on maternal mortality is to deal with all factors simultaneously (HERFON, 2006; Global Medial, 2010). However, while numerous studies have focused on the medical factors that are inimical to maternal health, very few studies have focused on the socio-cultural context of maternal health. It is therefore important to identify these factors that are associated with the health outcomes of pregnancy to adequately inform healthcare policy makers. These background socio-cultural factors associated with maternal mortality, though subtle, are profound in determining maternal health. This study is initiated to examine the socio-cultural background of maternal health with particular reference to Lagos State, Nigeria.

## **1.2 Statement of the Problem**

Maternal mortality is the most important indicator of maternal health and well being in any country (HERFON, 2006). From recent estimates, the number of deaths each year from maternal causes worldwide decreased from 536,000 in 2005 to an estimated 358,000 in 2008 and 273,500 in 2011. For every woman that dies, approximately 20 more suffer injuries, infection and disabilities in pregnancy or childbirth (IHME, 2012; UNICEF 2008; WHO, 2007). Even though maternal mortality is a worldwide phenomenon, the critical issues associated with it are most profound in developing countries. Hence, of the estimated figure for maternal deaths worldwide, developing countries account for 99 per cent (WHO, 2008), with an estimated 265,000 maternal deaths occurring in sub-Saharan Africa (UNICEF, 2008).

The situation is even more alarming in Nigeria. For example, in the year 2000, the maternal mortality ratio per 100,000 live births was 800 compared to 540 for Ghana and 240 for South Africa. However, by 2003, the maternal mortality ratio in Nigeria had risen to 948/100,000, in 2005 it was 1100/100,000 and 840/100,000 live births in 2008, while Nigeria Demographic Health Survey (NDHS) 2008 has put it at 545 per 100,000

live births (Berlin Institute for Population and Development, 2011; UNICEF, 2010; Zozulya, 2010; NDHS 2008; Ogujuyigbe and Liasu, 2007). Consequently, the chance of a Nigerian woman dying from reproductive health disorders and complications was put at 1 in 10 in 2002 (Population Reference Bureau, 2002), 1 in 18 in 2005, and 1 in 23 in 2008, placing the Nigerian woman at far greater risk than her counterpart in the developed world, where the risk is estimated to be 1 in 17,800 and 1 in 10000 in countries such as the Republic of Ireland and Singapore respectively (World Bank, 2011; UNICEF, 2010; Media Global, 2010; UNICEF, 2008; UNFPA, 2005). Some of the implications of these estimates are the depletion of the country's workforce and the overall stifling of rapid development.

Studies have shown that despite the differences in maternal mortality ratio between developed and developing nations, the pattern of maternal mortality and morbidity did not change over the years. Still, the most common medical major causes are haemorrhage, hypertensive disorders, infection, unsafe abortion, obstructed labour, and sepsis.

The reasons that are adduced for this is the persistent tradition of deliveries in domiciliary settings in unsafe and unhygienic conditions by untrained or poorly trained birth attendants (Begun; Aziz-un Nis and Begun, 2003; Izugbara and Ukwaiyi, 2004). Although maternal deaths in Nigeria are mainly due to complications of pregnancy and delivery, it is the socio-cultural context under which these pregnancies occur that pave the way for these complications and deaths. Incidentally very few studies have focused exclusively on this aspect. This study, therefore, attempts to fill this gap.

In an attempt to address maternal mortality and morbidity most scholars have emphasized on the medical causes. This is more or less focusing on symptoms and malfunctions of the body without considering the socio-cultural environment within which pregnant women interact. Many studies, such as, Orubuloye and Ajakaiye (2002); Ogujuyigbe and Liasu (2007); Falkingham (2003); Das Gupta (1997), have only assessed the socio-cultural factors in relation to health care utilization not in relation to adequate quality of maternal health. Individuals living in extremely rural or highly

populated urban areas are more at risk to have health problems, which can be attributed to increasing environmental hazards such as pollution and increased stress. Socio-environmental conditions such as gender biases, combined with poverty, stressful work environment, and poor quality of life force many more women into sickness, poor nutrition, early marriages and repeated pregnancies thereby exacerbating maternal mortality.

Deriving from the above, the critical questions that need to be asked include: why have the efforts to reduce maternal mortality and morbidity not yielded the desired results in Nigeria? What socio-cultural factors underlie maternal mortality in Nigeria? And how do they impact on the overall wellbeing of women? These questions form the basis on which this study is initiated. For, if the medical factors have been identified by researchers and policies have been formulated along those lines without significant progress, then there would be other remote and intervening factors that precipitate maternal mortality. What this study seeks to address, therefore, are those socio-cultural factors that condition the proximate medical determinants that lead to maternal mortality. Some of the proximate medical determinants of maternal mortality that have been identified in the literature include, haemorrhage, hypertensive disorders, infection, unsafe abortion, and obstructed labour (WHO, 2011; Begun, Aziz-un Nis and Begun, 2003; Izugbara and Ukwai, 2004). However, this study intends to extend our knowledge beyond this point to examine the socio-cultural context of maternal health. The need to address this issue is crucial because the inability to show any direct link between health care expenditures and maternal mortality may affect adversely the availability of funds for future health care. This situation becomes even more critical as resources become more restricted and as health competes with other pressing development needs in the country.

### **1.3 Research Questions**

Based on the statement of problem, the following research questions are addressed:

1. What social factors induce medical proximate determinants of maternal health?
2. What cultural beliefs and stereotypes affect maternal health?
3. How does role conflict influence maternal health?
4. In what ways do working conditions affect maternal health?
5. How does social support influence maternal health?

### **1.4 Aim and Objectives of Study**

The overall aim of this study was to examine the socio-cultural context surrounding pregnancy and child birth and how this context precipitates maternal morbidity and mortality. In order to achieve this, there are the specific objectives which include:

1. identify the social factors that induced the medical proximate determinants of maternal health;
2. explore the cultural beliefs and stereotypes that are associated with maternal health,
3. examine how role conflict influences maternal health;
4. investigate how mothers' working conditions affect maternal health; and
5. evaluate how social support influence maternal health.



### **1.5 Justification for the Study**

One of the anticipated outcomes of the Millennium Development Goals (MDGs) is the improvement of maternal health and the reduction in maternal mortality by 75% by the year 2015. With Nigeria's poor record of maternal mortality, it is clear that the global MDG goals cannot be achieved without a significant outcome from Nigeria in terms of reductions in rates of maternal morbidity and mortality.

Although analyses of recent trends show that the country is making progress in reducing down maternal mortality rates, the rate of reduction still remains too slow to achieve the MDG goal. Thus, a sociological study of maternal deaths is expedient to gain more insight into those salient socio-cultural barriers to wellbeing and what can be done to improve the situation.

The study of maternal health in Nigeria's urban centers which witnessed the most rapid social and economic change in recent years is important and necessary for several reasons: first, the maternal health status in Nigeria is poor, based on the high rate of maternal mortality. Among the health and mortality indicators, levels of maternal mortality show striking disparities according to level of development. Maternal mortality is a sensitive indicator of the status of women in society, as well as access to health care and adequacy of the health care system in responding to their needs.

The maternal mortality rate (MMR) in Nigeria without doubt calls for urgent action. Though recent United Nations' figures place Nigeria second to India on the MMR table (Ogbonnaya and Olawale 2008), research into this sensitive aspect of life will therefore, shed more light on certain socio-cultural factors that precipitate maternal health challenges, and help to initiate more sensitive intervention strategies.

Secondly, the improvement of maternal health was the key outcome of the international conference on safe motherhood convened by the Inter-Agency Group in 1987 to identify global strategies for addressing the high rate of maternal mortality in developing countries (Lule *et.al*, 2005; WHO, 2007). To address women development issues,

several international conferences have been convened including the Beijing conference in 1995, the International Conference on Population and Development (ICPD), which took place in Cairo in 1994 and the United Nations MDGs. The growing pain is that years after the conference declarations, Nigerian women still encounter several challenges due to pregnancy-related illness. Reducing maternal mortality calls for concerted efforts especially in the area of research that will illuminate our understanding of the social elements associated with maternal health. Efforts to address these problems will not only improve maternal health in Nigeria, but will also contribute to achieving a key component of the MDGs, and secure the country in good light in the global comity of nations.

Moreover, the issue of maternal mortality and morbidity cannot be discussed in isolation of the level of development of a nation. Azimi and Loffi (2011) identified maternal health as basic health indicator that reflects a nation's health status. One of the major problems in maternal health outcomes facing this nation is the low level of development. Countries are ranked by various health and economic indicators to show how they fare compared with others. Industrialized countries dominate the 'high human development' category characterized by high life expectancy, low infant mortality rate, and low maternal mortality. On the other hand, the statistics of these indices are also generally lower in the 'medium' than in the 'low' human development countries (Gabe *et al* 2004). Sub-Saharan Africa is the region in the world where maternal mortality is considerably highest, not to mention the poorest region, lagging behind in development progress compared to other regions (UNICEF 2005). Women's experience of pregnancy and child birth exert influences far beyond their own health, crucial as this is, to affect their status and empowerment, their children and wider family's health, education and wealth and, indeed, their nation's society and economy (HCIDC, 2008). Therefore, addressing maternal health's line of attack in a country in sub-Saharan Africa is not only relevant for women's empowerment, but also for women in development in Africa.

## 1.6 Operational Definition of Terms

For the purpose of clarity, the key words of this study have been given operational definitions as follows:

**Maternal Health:** This is defined as the physical wellbeing of a mother in relation to her pregnancy. Maternal health includes prenatal care and postnatal care of the mother and of the child up to the age of five years.

**Maternal Mortality:** The World Health Organization (WHO, 2007) in the international statistical classification of diseases and related health problems, tenth revision (ICD-10), has defined maternal mortality as “the death of a woman while pregnant or within 42 days of a termination of a pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental and incidental causes”. This is the context in which maternal mortality is used in this study.

**Reproductive Health:** According to the United Nations’ Concise Report on Reproductive Rights and Reproductive Health, reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes (United Nations, 1996).

**Maternal Morbidity** describes pregnancy- and childbirth-related illness and injury.

**Maternal Mortality Ratio (MMR):** Number of maternal deaths during a given time period per 100,000 live births during the same time-period, usually a year (WHO, 2007).

**Maternal Mortality Rate:** This is the number of maternal deaths in a given period per 100,000 women of reproductive age during the same time-period (WHO, 2007).

**Risk factors:** Factors, situations, beliefs etc. that are inimical to maternal health.

**Socio-cultural Context:** These are the surrounding societal and cultural factors or circumstances, which influence or hinder maternal health. They are also the social and cultural framework in which an individual functions.

## **1.7 Organization of Chapters**

The thesis is organized in to five chapters. Chapter one covers background to the study, statement of the problem, research questions, aim and objectives of the study, justification as well as the scope of the study. Chapter two contains a comprehensive literature review of the subject under investigation and a presentation of the theoretical and conceptual framework that the study adopted. Chapter three concentrates on the research methodology which includes the study population, sample design and procedure, instrument of data collection, method of data analysis, and the limitations of the study. Chapter four focuses on data presentation, general description of research data, data analysis, and interpretation of results as well as the discussion of the results obtained from the study. Chapter five presents the summary, conclusion and recommendations.

## **CHAPTER TWO**

### **LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

#### **2.0 Introduction**

This chapter presents a detailed review of the literature as it relates to maternal health. The presentation of the review follows a logical sequence by first reviewing how scholars in this field have interrogated the concept of health and implication of such conceptualization on government policies toward the provision of health services. Owing to the fact that the study is concerned with the social and cultural context of maternal health, an extensive review of literature on important factors that have been identified by scholars is next presented followed by the theoretical framework.

#### **2.1 The Concept of Health**

In an attempt to operationalize health with universal appeal, the World Health Organization (WHO) has defined health as a state of complete physical, mental and social well being and not merely the absence of disease or infirmity (Jegade, 2010). Although this definition has been widely adopted, a number of scholars still identify some problems with it. For example, Badru (2003) has noted that there is a problem of identifying and actually observing such abstract notion as mental and social wellbeing, even though the physical dimension can be subjected to some measurement. In other words, can anyone fulfill all the conditions of health? Similarly, Asakitikpi (2007) also pointed out the neglect of the spiritual dimension of health especially as it pertains to African societies. It has been observed that most health issues and death in the African society are attributed to spiritual causes (Mensah, 2008). An increasing number of researches have been published within the last 20 years and reviews have examined the connections between spirituality-religiosity, health and quality of life and its potential to prevent, heal, or cope with diseases (Koenig, Larson and Larson 2001). Religion and spiritualism are very much alive in Africa, and their influence on health and illness cannot be overlooked in contemporary African societies, since notions of illness causation and healing span the physical and spiritual domains (Mensha, 2008).

Therefore, as noted by Idowu and Asakitikpi (2008), the pervasiveness of spirituality in the lives of an average Nigerian and the belief that the supernatural has profound influence on the physical is of prime importance in defining health.

In the same vein, Nwabuaeze (2003) refers to a healthy condition as being sound in body, mind or spirit. Health is a situation of being free from physical disease or pain or mental disorder or freedom from emotional or spiritual drudgery. Also, according to Badru (2003), patterns of health and disease vary from one society to the other. Besides, people's perception and definition of ill health and disease vary according to their cultural practices, educational attainment and religious experiences, among others. For instance, as observed by Akintunde (2006), among the Yoruba in Western Nigeria, it is true that "*alafia lo ju, ilera loro, eni ti o ni alafia lo ni ohun gbogbo*" (health is paramount, health is wealth, whoever is in good health has everything). The absence of good health is illness and illness is understood in three particular ways. First, it is natural or physical, such as poisoning, pain and so on. Second, it is supernatural or spiritual, including attacks by witches or wizards. Third, it is mystical, which attributed to spirits, divinities, or ancestors for punishment of offences against them. Therefore, to better understand the concept of health, Jegede (2010) claimed that for the WHO definition to be comprehensive and acceptable there must be maintenance of body balance, physical and emotional balance, cultural and political balance, and spiritual and ideological balance. In this sense, disease is a threat to harmonious functioning of the body system (Akande and Owoyemi, 2009). Hence, there is need for protective mechanism of the body to remain healthy in order to avoid being sick.

## **2.2 Maternal Health**

Maternal health is defined by WHO as the "physical wellbeing of a mother during pregnancy, childbirth and postpartum" (WHO, 2010). Maternal health includes prenatal care and postnatal care of the mother and of the child up to the age of five years (Fadeyi, 2007). Many biological, economic, social, and cultural factors such as poverty, malnutrition, working condition, child marriage and gender inequities may compromise the health of pregnant women (Graczyk, 2007). Scholars such as Ufford and Menkiti

(2001) and Lanre-Abass (2008), have identified early childbearing, cultural, logistical, and poverty, as a multifaceted condition that has many dimensions. Among the dimensions are poor access to public services and infrastructure, unsanitary environmental surrounding, illiteracy and ignorance, poor health, insecurity, violence and social exclusion, as well as household income and food insecurity are life-shortening which can also increase a woman's risk of dying in the process of reproduction. Lule, *et al* (2005) have also noted that a woman's age, her ability to use reproductive health care services effectively, and general health status, including nutrition contribute to poor maternal health. The World Health Organization (WHO) has noted that there is an urgent need for programmes that address the health and safety of pregnant adolescents and the need to teach young women the skills to build a successful future. The United States Agency for International Development (USAID) has also identified critical factors for improving adolescent maternal health: encouraging young women to use prenatal care to identify and treat malaria, anemia, and other health issues; providing obstetric care to ensure safe delivery for young mothers and their infants; and postnatal care to identify post-partum health issues, provide newborn care and offer contraception to accomplish birth spacing (Graczyk, 2007). These factors are also applicable to all women during pregnancy. Providing quality reproductive health services enables women to balance safe childbearing with other aspects of their lives and, it also helps protect them from health risks, facilitates their social participation, including employment, and allows girls to continue and complete their schooling (UNFPA, 2000).

Ensuring reproductive health does not only involve provision of modern quality health services and attendance to the same, but also personal health consciousness during pregnancy. While some scholars and writers have advocated for the availability of basic comprehensive and formal obstetric and gynaecological care in order to substantially reduce the incidence of maternal mortality, other researchers have found out that even when formal skilled care is available, women may not seek or receive it (Igun, 1989). This is especially so in countries such as Nigeria where informal and formal healthcare services coexist and are viewed as veritable options for reproductive healthcare

(Izugbara and Ukwayi, 2004). Also, Orubuloye and Oni (1996) identified patent medicine stores where personal relationships between the customers and owners of the medical stores, free consultancy and flexible pricing, serve as the alternative source of care for many.

The importance of starting prenatal care as early as possible, even before pregnancy was emphasized by Ben-joseph (2007), even though this may not always be possible or practicable. The sooner healthy lifestyles begin in pregnancy, the better the chances of ensuring the mother's health and that of the baby. Ideally, prenatal care should start before the pregnancy. It is necessary for a woman to get ready for pregnancy, to consult a health care provider for a complete checkup to make sure she is in good health. Healthy lifestyles contribute both to the general health of pregnant women and to that of their babies. For the baby's sake and that of the mother, it is important for a woman to take good care of herself during pregnancy. For example, as noted by Ben-joseph (2007), because abnormal level of glucose increases the risk of birth defects and other complications, it is advisable that women with diabetes must be careful about keeping their blood glucose level under control, both before they conceive and during their pregnancy.

Also, women should aim to maintain a nourishing and varied diet not only from the earliest days of their pregnancy, but before they are pregnant. A balanced, nutritious diet is an important aspect of a healthy pregnancy. If the woman is healthy, balancing carbohydrate, fat, and proteins, and eating a variety of fruits and vegetables will usually ensure good nutrition. Now that a pregnant woman is eating for two (or more), this is not the time to cut calories or go on diet. In fact, it is just the opposite; a pregnant woman needs about 300 extra calories a day, especially later in pregnancy when the baby grows quickly. If the woman is very thin or carrying twins, she needs even more. But if she is overweight, the health care provider may advise that she consumes fewer extra calories (Gavin 2005, Ben-joseph, 2007, Henry, 2007).



Achieving maternal health is multifaceted and all efforts must be put in place to ensure the reduction of the alarming rate of maternal health complications in Africa. Ninety nine percent (99%) of the estimated figure for maternal deaths worldwide happened in developing countries (WHO, 2008), with an estimated 265,000 maternal deaths occurring in sub-Saharan Africa, and 840/100,000 live births in Nigeria (World Bank, 2011; UNICEF, 2008). Certain factors have been found to undermine maternal health. Some of these are discuss below:

### **2.2.1 Food Safety**

Food safety has been identified by scholars as one of the major factors that undermine maternal health. For this reason, pregnant women should give special attention to food safety because food borne pathogens can be particularly dangerous during pregnancy. Two of the deadliest pathogens that have been identified are *Listeria monocytogenes* and *toxoplasma gondii* (Insel and Roth, 2004). These pathogens are most often found in undercooked or ready-to-eat meat, poultry, or seafood, products made with unpasteurized milk and unpasteurized juice. *Toxoplasma gondii*, a parasite carried by cats, can also contaminate food or soil. To avoid food borne illness, pregnant women should wash their hands thoroughly before preparing or eating food, and also the fruits they eat (Insel and Roth 2004). Poor personal hygiene, therefore, has deleterious effect on the health of women as well as their unborn child. Studies conducted in Ibadan metropolis by Asakitikpi (2004) have also confirmed that the *Escherichia coli* pathogen is an important source of maternal and child health due to varied cultural practices.

### **2.2.2 Sleep**

It is important to get enough rest during pregnancy. A pregnant woman needs more rest and sleep to maintain her well-being and that of the fetus (Insel and Roth, 2004). Mothers in Lagos State, Nigeria, do not have enough sleep and rest due to their jobs and positions in the family. The woman's body is working hard to accommodate a new life, so she probably feels more tired than usual. And as the baby gets bigger, it will be harder to find a comfortable position when a woman is trying to sleep (Gavin, 2005).

### **2.2.3 Exercise**

Regular, low-impact exercise is also good during the pregnancy. Insel and Roth (2004) state that physical activity during pregnancy contributes to mental wellness. A moderate exercise programme during pregnancy does not adversely affect pregnancy or birth; in fact, regular exercise appears to improve a women's chance of an on-time delivery. The 2005 dietary guidelines by Gavin (2005) recommended that healthy pregnant women get 30 minutes or more of moderate intensity physical activity every day. Regular exercise during pregnancy has been shown to be extremely beneficial.

How much and how long a woman can exercise in pregnancy depends on her health and on the doctor's comfort level. It has also been observed by Haiken (2007) and Insel and Roth (2004) that lower impact exercise such as swimming or walking may be fine as long as the woman feels comfortable, but it will depend on how well her body is handling the pregnancy and whether she has any other risk factors. Though, this is not really lacking among Nigerian women, even if it is not a conscious activity, most of the pregnant women still engage in rigorous business activities when in pregnancy.

### **2.2.4 Family Planning**

Writers such as Graczyk (2007) have noted that family planning can reduce maternal mortality and morbidity. Accordingly, reproductive health care, including family planning services, can help women, including adolescents to prevent unintended pregnancy, complications during pregnancy and delivery, as well as unsafe abortion. Worldwide, over 200 million women have no access to modern, effective contraception (USAID, 2006). In the developing world, lack of access to family planning results in some 76 million unintended pregnancies each year with untoward consequences. Experts say that contraceptive use could prevent up to 35 percent of maternal deaths and when contraceptive use increases, countries' infant mortality rates go down (UNFPA, 2005). In countries where less than 10 percent of women use contraception, the infant mortality rate is 100 deaths per 1,000 live births compared to 52 per 1,000 in countries where over 30 percent of women use contraception (UNFPA, 2000).

Fathalla (1993), identified that, the definition of health by WHO serves as a reminder that health is not merely the absence of disease or infirmity. The relation of contraception to women's health should, therefore, be viewed in this broad context of the definition of health. The ability to regulate and control fertility is a basic ingredient in the positive definition of health for women. Measures to reduce the incidence of unintended pregnancy and unsafe abortion, including improving access to family planning services and safe abortion care, are crucial steps toward reducing maternal mortality (Sedgh, *et al.* 2012). A woman who is unable to regulate and control her fertility cannot be considered to be in a state of complete physical, mental and social well-being. She cannot have the mental joy of a pregnancy that is wanted, avoid the mental distress of a pregnancy that is unwanted, plan her life, pursue her education, and enjoy both a productive and reproductive career (Fathalla, 1993).

It is clear that a good family planning programme can reduce fertility, even in very poor countries (Jain and Ross, 2012) and save the lives of mothers, by preventing the exposure of women to the risks of pregnancies which they do not want, and by allowing women to plan their pregnancies to take place at times that are more favourable for safe childbearing. These are good healthy choices for a woman. If a woman is healthy, there is no reason to anticipate complications with the pregnancy and delivery (United Nations, 1991). Studies conducted prior to the 1994 Cairo meeting found that family planning programmes are most effective when a strong programme is implemented in a good social setting (Jain and Ross, 2012). Hence, better nutrition, broader access to appropriate health care, improved education and good family planning are keys to improving women's health and reducing their reproductive burden. Such services allow women to have more control over their child-bearing and their lives. But the benefits are quickly lost if these essential services are withdrawn or cut back because of social and economic pressures (United Nations, 1991). Therefore, countries have been called upon to reduce gender inequality in health, education and economic opportunities and to provide contraceptive services within the context of reproductive health (Jain and Ross, 2012).

## 2.3 MEDICAL CAUSES OF MATERNAL MORTALITY AND MORBIDITY

Different interactive factors contribute to maternal morbidity and mortality. The range is wide and includes the behaviour of families and communities, social status, education, income, nutritional status, age, and availability of health services. It is important to know that non-health sector activities also influence maternal health outcome. The causes of maternal mortality have traditionally been classified as direct and indirect (Khama *et.al*, 2006).

**Direct Obstetric Deaths** are those resulting from obstetric complications of the pregnant state (pregnancy, labour and the puerperium), from interventions, omissions, incorrect treatment, or from a chain of events resulting from any of the above.

**Indirect Obstetric Deaths** – The ICD-10 defines “indirect causes” as those resulting from previous existing disease or disease that developed during pregnancy and which was not due to direct obstetric causes, but was aggravated by physiologic effects of pregnancy (Garenne, 2011; Khama *et.al*, 2006). According to Dillaway (2005) and Garenne (2011), pregnancy needs continual monitoring because it is associated with major physiological changes that may increase susceptibility to infectious and noninfectious diseases. Specifically, pregnancy has potential of inducing transient depression of cell-mediated immunity and is often associated with anemia and hypertension, conditions that may have an effect on the pathogenicity of various diseases. Some of the immunological changes may be associated with increased susceptibility, where as others may be associated with increased resistance (Garenne, 2011). The most common direct medical causes of maternal morbidity and mortality are:

### 2.3.1 Gestational Diabetes

This is also known as diabetes of pregnancy. It is caused by a problem processing the glucose (or blood sugar) in the blood stream. Glucose is important to the body; it provides fuel for cellular growth and metabolism. To be processed effectively, glucose requires a companion hormone known as insulin. Insulin facilitates the transfer of

glucose into the cells where it is metabolized, or processed for energy. When insulin is not enough or when the body is not effectively utilizing it, this results in a back up of glucose into the bloodstream, a situation that is potentially damaging to all of the organ systems and a developing fetus (Rord-Martin and Aron, 2003). The placenta, the organ that transfers hormones and nutrients from the mother to the baby via the umbilical cord, is responsible for the baby's growth and development. Hormones in the placenta block the action of insulin, a regulatory hormone that controls the amount of glucose in the blood. This dilemma, called insulin resistance, forces the pancreas to produce up to three times as much insulin for the body to function properly. Normally, the body is able to meet this challenge and the blood sugar levels normalize. Gestational diabetes occurs when the body does not produce enough insulin during pregnancy to combat insulin resistance, resulting in high blood sugar levels, or hyperglycemia (MedHelp, 2011). In most women, the condition does not reach critical levels, and their blood sugar levels stay within normal ranges. In others, excess blood glucose accumulates to potentially dangerous levels and treatment is required (Rord-Martin and Aron, 2003).

Like other types of diabetes, gestational diabetes affects how well the body uses sugar (glucose), the cell's main source of fuel. Gestational diabetes causes high blood sugar levels that can affect a woman's health and that of the growing baby. For most pregnant women, gestational diabetes does not cause any noticeable physical symptoms. When gestational diabetes symptoms do occur, they are usually mild and not life threatening. These include: blurred vision, fatigue, frequent infections, increased thirst, increased urination, nausea and vomiting, and unexplained weight loss (MedHelp, 2011).

Without proper treatment, uncontrolled blood glucose levels can result in fatal death or a condition known as fetal macrosomia (a baby that is too large). Women who develop gestational diabetes have an increased risk of a diagnosis of type 2 diabetes later in life. Their children are also at risk for both type 2 diabetes and obesity (Rord-Martin and Aron, 2003). But healthy habits that include eating right, exercising and maintaining a healthy weight go a long way toward preventing gestational diabetes and treating it if one develops it.

### 2.3.2 Eclampsia

The terms “preeclampsia/eclampsia” and “toxemia” are used interchangeably to mean the same thing: pregnancy-induced hypertension (high blood pressure) (Rord-Martin and Aron, 2003; Encyclopedia, 2011). Preeclampsia and eclampsia are not distinct disorders but the manifestation of the spectrum of clinical symptoms of the same condition. In preeclampsia, hypertension and proteinuria are present, and when convulsions occur in addition to these signs, the condition is referred to as eclampsia (Osungbade and Ige, 2011).

Preeclampsia is a pregnancy-related hypertensive disorder occurring usually after 20 weeks of gestation and occurrence up to 10 days after delivery had been documented (Osungbade and Ige, 2011; Akinola *et al*, 2008). According to Abeysena (2010), preeclampsia is a major contributor to maternal and fetal morbidity and mortality. Pregnancy induced hypertension leads to fetal complications such as pre-term births and fetal growth retardation. It also leads to maternal morbidities including nephropathy, hepatic changes, HELLP syndrome and maternal death. It also related to cardiovascular disease in later life. Most cases of toxemia are characterized by high blood pressure; excessive swelling of the face, hands, and ankles; too-rapid weight gain; headaches; and protein in the urine, abdominal pain. When left untreated, toxemia can cause nausea, vomiting, blurred vision, convulsions, and coma (Rord-Martin and Aron, 2003; Encyclopedia, 2011).

Preeclampsia is a public health threat both in developed and developing countries. However, the impact is felt more severely in developing countries. Akinola *et al* (2008) noted that, while the incidence has been decreasing and its outcome improving in the developed countries, where special management protocols have been employed, its incidence is still high in developing countries such as Nigeria. WHO estimates the incidence of preeclampsia to be seven times higher in developing countries than in developed countries (Osungbade and Ige, 2011). The problem is compounded by the unpredictable nature of the disease, despite extensive researches; no definitive aetiology

has been identified (Akinola *et al*, 2008). A study on hypertensive patients shows that there is an association between blood pressure and the weather. Another study emphasized the possible role of environmental factors like diet during the seasons (Okafor *et al*, 2009).

According to Akinola *et al* (2008), perhaps the unacceptable high fatality rate, can be attributed to the severity of the pathology on presentation since most of these patients were unbooked and presented rather late when complications had already set in and intervention ineffective due to late presentation of cases (Osungbade and Ige 2011). Often, treatment involves hospitalization until the blood pressure returns to normal, followed by limited activity and sometimes bed rest at home (Human Diseases and Condition, 2011). And also, weight reduction, good control of chronic hypertension, and reduction of stressful conditions at home and in pregnancy could be steps towards the primary prevention of this disorder (Anorlu, Iwuala, and Odum 2005). When preeclampsia does not improve with treatment, or goes undiagnosed, it may develop into a potentially life threatening condition where convulsions occur (Rord-martin and Aron, 2003).

### **2.3.3 Postpartum sepsis**

This is another major cause of maternal death. According to World Health Organization (2009) puerperal sepsis is defined as infection of the genital tract occurring at any time between the rupture of membranes or labour and the 42<sup>nd</sup> day post partum in which 2 or more of the following are present: abnormal vaginal discharge (example presence of pus), abnormal smell or foul odor of discharge, delay in the rate of reduction of size of the uterus (less than 2 cm per day during the first 8 days) (Momoh, Ezugworie, and Ezeigwe, 2010). Bacteria may be either endogenous or exogenous.

Endogenous bacteria - these are bacteria which normally live in the vagina and rectum without causing harm. Even when a clean technique is used for delivery, infection can still occur from endogenous bacteria. Endogenous bacteria cause infection if they are carried into the uterus during pelvic examinations, if there is tissue damage etc. while,

exogenous bacteria are bacteria which are introduced into the vagina from the outside and introduced into the vagina by unclean hands and unsterile instrument etc (WHO and ICM, 2008).

Puerperal sepsis has been a common pregnancy-related condition, which eventually lead to obstetric shock or even death. Momoh *et al*, (2010) in an hospital based research, identified those patients that are likely to be victims of puerperal sepsis as the unbooked mothers; (those expected mother who officially do not register for the health facilities in the hospital or those who do not attend antenatal clinic in the hospital, they either patronized quacks or do not visit facilities at all). Also, non adherence to aseptic condition, delivery/prolonged rupture of membrane is the commonest predisposing factor to puerperal sepsis.

Some women are more vulnerable to puerperal sepsis, including for example those who are anaemic and/or malnourished, those with protracted labour, prolonged rupture of the membranes, frequent vaginal examinations, those with a traumatic delivery, caesarean section and poor standard of hygiene. Other community risk factors are:

- low socioeconomic status;
- inability to pay for treatment;
- poor level of general education;
- cultural factors which lead to delay in seeking medical care;
- low status of women,
- lack of knowledge about symptoms and signs of puerperal sepsis,
- lack of health education, danger signs of infection or lack of birth and emergency preparation plan (WHO and ICM, 2008).

Another problem identified by Momoh *et al* (2010), was that most postpartum infections take place after hospital discharge, this is usually occur after 24 hours after delivery, therefore in the absence of post natal follow-up as is the case in many developing



countries, many cases of puerperal infections can go undiagnosed and unreported (Olapade and Lawoyin, 2008).

Puerperal sepsis, can be prevented, through careful attention to antiseptic procedures during delivery, consumption of adequate nutritive diet/supplements especially those rich in protein and vitamins during pregnancy (Momoh *et al*, 2010).

### **2.3.4 Placenta previa**

The placenta provides nourishment, blood, and oxygen to the baby, and literally connects the mother and the baby. Problems can occur with either the structure or the placement of the placenta, which may pose a risk to mother and the unborn child (Rord-martin and Aron, 2003). Placenta previa means that the placenta is lying low in the uterus. It can be dangerous if the placenta actually covers the cervix during labour and delivery. The fetus still requires the blood, oxygen, and nutrients provided by the placenta during birth, and so the placenta should be the last thing out. Placenta previa can lead to premature labour, and women with this problem sometimes must limit their activity or stay in bed until the baby is born. Doctors can monitor the position of the placenta using ultrasound (Human Diseases and Condition, 2011). When it is time to have the baby, doctors opt for a cesarean section if the placenta is still covering or very close to the cervix (Encyclopedia, 2011). Placenta problems are usually the result of an acute or chronic maternal illness which includes maternal high blood pressure, diabetes, preeclampsia, kidney disease, and physical trauma to the abdomen (Rord-martin and Aron, 2003).

### **2.3.5 Preterm labour and premature birth**

More babies are born past their expected due date. A premature birth means delivery before the thirty-seventh week of pregnancy. About one-third of premature babies are born early because the mother went into labour too soon. The other cases occur because the amniotic sac (amniotic sac is the sac formed by the amnion, the thin but tough membrane outside the embryo, which lines the outermost embryonic membrane and

contains the embryo and later the fetus, with the amniotic fluid around it) ruptures prematurely or because a health problem with the mother or baby requires early delivery (Rord-Martin and Aron, 2003; Encyclopedia, 2011).

Among the many risk factors for preterm labour are smoking, alcohol use, drug abuse, vitamin deficiencies, a job that requires standing for long time periods, infections like German measles, placenta previa or other physical causes, and poor nutrition.

Preterm labour that results in a premature birth poses serious health problems for the baby who has not finished developing inside the uterus (Encyclopedia, 2011).

### **2.3.6 Hemorrhage**

Obstetrical hemorrhage refers to heavy bleeding during pregnancy, labour, or the puerperium. Bleeding may be vaginal and external, or, less commonly but more dangerously, internal, into the abdominal cavity. Typically bleeding is related to the pregnancy itself, but some forms of bleeding are caused by other events (Webster, 2011). Obstetrical hemorrhage is a major cause of maternal mortality. There are several possible reasons for severe bleeding during and after the third stage of labour: uterine atony (failure of the uterus to contract properly after delivery), trauma (cervical, vaginal, or perineal lacerations), retained or adherent placental tissue, clotting disorders, and inverted or ruptured uterus (PATH, 2011). Post partum haemorrhage was found to be responsible for more deaths in older (29 and above), grand-multiparous women in Nigeria, which may be due to an increased incidence of uterine atony with increasing age and parity (Olopade and Lawoyin, 2008).

All women are considered at risk, and hemorrhage prevention must be incorporated into care provided at every birth. In addition, women should be encouraged to give birth with a skilled birth attendant who can manage Post Partum Haemorrhage (PPH) should it occur, in spite of preventive measures. However, poverty, illiteracy, and unavailability of trained medical personnel combine to accentuate these problems in Nigeria, as do dwindling health resources as a result of bad governance (Ujah and Ejah, 2011).

### **2.3.7 Miscarriage**

Miscarriage is also called spontaneous abortion, and it means that suddenly the pregnancy terminates on its own. Bleeding, cramping, high fever, extreme nausea and vomiting that is sudden and unusual, severe headache and abdominal pain often signal a miscarriage (Rord-Martin and Aron, 2003; Encyclopedia, 2011).

Scientists estimated that as many as 40 percent of pregnancies end in miscarriage, although most of these occur so early that a woman may not even realize that she is pregnant (Encyclopedia, 2011). Early miscarriages often occur when the body naturally rejects a fetus that is not developing properly. Later miscarriages are much less common. Reasons for late miscarriages include a placenta that is improperly attached to the uterus, the placenta separating from the wall of the uterus for some reason, and other causes.

The consensus is that, these causes of death during and following pregnancy and child birth are preventable or manageable. Antenatal care during pregnancy and the attendance of skilled professionals during and after childbirth reduce the risk associated with these complications. Access to family planning services to prevent unwanted pregnancies is also essential (ODI, 2012). However, there are common obstacles to the effective delivery of these key elements in Africa. These obstacles act as bottlenecks to better provision of maternal health care. One of the obstacles is delays in seeking health care: women or their families not recognizing a life-threatening condition are often slow to seek medical assistance. Obstacles to timely diagnosis and treatment include suspicion or ignorance of modern health services, prohibitive financial costs and weak incentives to use public health facilities (ODI, 2012).

## **2.4 GLOBAL ACTION ON MATERNAL MORTALITY**

There are a number of previous declarations, as well as regional, national and international initiatives on maternal health. In 1987, two independent initiatives drew attention to the continuing high levels of maternal mortality and morbidity in developing countries (Ravindran & Berews, 2000). The Safe Motherhood Initiative was launched by the World Health Organization (WHO) and other international agencies in 1987 and was immediately supported by International Confederation of Midwives (ICM, 2012). The second was the International Day of Action for Women's Health on 28 May 1988, launched by the Women's Global Network for Reproductive Rights and the Latin American and Caribbean Women's Health Network through a 'Call to Women for Action to Prevent Maternal Mortality', which had been endorsed by participants at the 5th International Women and Health Meeting in 1987 in San José, Costa Rica (Ravindran & Berews, 2000). At that time the number of women suffering maternal deaths worldwide was estimated to be at least 600,000 each year - with 99% of deaths occurring in the developing world (ICM, 2012).

More countries have now made a commitment to Safe Motherhood than ever before – through the Programme of Action of the International Conference on Population and Development (ICPD) in Cairo in 1994, the Technical Consultation on Safe Motherhood in Colombo, Sri Lanka in 1978 and the ICPD review process in New York in 1999. At the ICPD in 1994, all governments agreed to reduce maternal mortality by one half of the 1990 levels by the year 2000, and by a further half by 2015.

#### **2.4.1 International Conference on Population and Development (ICPD) 1994 and Maternal Health**

The 1994 International Conference on Population and Development (ICPD) articulated a bold new vision about the relationships between population, development and individual well-being. At the ICPD, 179 countries adopted a forward-looking, 20-year Programme of Action (PoA) that built on the success of the population, maternal health and family planning programmes of the previous decades while addressing, with a new perspective, the need of the early years of the twenty-first century (UNFPA, 1995). The ICPD was not an isolated event. Its Programme of Action builds on the considerable international consensus that has developed since the World Population Conference at Bucharest in 1974 and the International Conference on population at Mexico City in 1984, to consider the broad issues of and interrelationships between population, sustained economic growth and sustainable development, and advances in education, economic status and empowerment of women (United Nations POPIN, 1994). The 1994 conference was explicitly given a broader mandate on development issues than previous population conferences, reflecting the growing awareness that population, poverty, patterns of production and consumption and the environment are so closely interconnected that none of them can be considered in isolation. The conference achieved consensus on two basic objectives on maternal health. These objectives include the promotion of women's health and safe motherhood; and to improve the health and nutritional status of women, especially of pregnant and nursing women, to achieve a rapid and substantial reduction in maternal morbidity and mortality and reduce the differences observed between developing and developed countries and within countries. Countries are enjoined to strive to effect significant reductions in maternal morbidity and mortality to levels where they no longer constitute a public health problem by the year 2015.

#### **2.4.2 The Millennium Development Goals (MDGs)**

Diverse range of players across the globe has agreed on a common platform of priorities for addressing the many faces of extreme poverty, hunger, joblessness, diseases, lack of shelter, gender inequality and environmental decline. The MDGs are measurable targets attached to a time frame for making a difference in the lives of people. Governments in developing and developed countries have jointly committed themselves to provide the resources and the policies to implement these Goals (UNECA, 2005). The MDGs is an international commitment to human development endorsed by over 180 member states at the United Nations General Assembly in September, 2000.

African leaders have adopted the MDGs as a tool within their wider development planning framework, in order to end the tragic condition in which so many Africans are deprived of their basic human rights, such as health, education, shelter and security, by making the Goals work as tools for coordinating development policy (UNECA, 2005).

Working for the survival of mothers is human rights imperative. It also has enormous socio-economic ramifications and is a crucial international development priority. Contained in the eight goals, 18 targets and 48 indicators of the MDGs are a number of previous declarations, as well as regional, national and international initiatives. Both the International Conference on Population and Development Goals call for a 75 per cent reduction in maternal mortality between 1990 and 2015. At the ICPD in 1994, all governments agreed to reduce maternal mortality by one half of the 1990 levels by year 2000, and by a further half by 2015.

Going by the mid-point assessment of the millennium development goals in Nigeria presented by NISER (2008), it could be observed from Table 2.1 below that instead of moving towards the achievement of the MDG goal of reducing maternal mortality by two thirds by 2015, the trend indicates that the situation is getting worse. As shown in the Table below, by the year 2007, going by the target of 2015, Nigeria should have reduced maternal mortality to 440 per 100,000 live births. But if the observed trend

between 2000 and 2004 continues at the same rate, by 2007, the maternal mortality rate should have increased to 872 per 100,000 live births. If this trend should continue till 2015, the MMR should have increased to 1,064 per 100,000 live births. This will mean a 504% deviation from 176 MMR per 100,000 live births.

**Table 2.1 Deviation of Actual Achievements on MDG 5 from Target**

<b>Year</b>	<b>Actual MMR</b>	<b>Target MMR</b>	<b>Deviation (%)</b>
2000	704	704	
2004	800	638	-25.39
2005	824	572	-44.06
2006	848	506	-67.59
2007	872	440	-98.18
2015 *	1064 *	176	-504.55

\* Probable achievement if trend continues

Source: NISER, 2008

It has been observed that midwives on their own cannot solve these problems. However, by providing high quality care, and being aware of the broader issues, they can optimize situations. For example by teaching the women they care for to make best use of limited food and clean water supplies, to reduce the risks of spreading infection and to recognize the signs of potential complications in pregnancy and labour (ICM, 2012).

Also, most programming on safe motherhood in Nigeria had been reported to be initiated by non-governmental organizations working with funding from international donors. However, donor funding had also been found not to be sufficient as the major determinants of maternal mortality are often internal issues. Therefore, it was suggested, that the systemic problem that related to governance and the quality and

effectiveness of health services that need to be tackled from within before a reduction in mortality can be achieved (Okonofua, 2010).

Balakrishnan (1996) has noted that the recommendations from the conference in Cairo have been celebrated as an advance to higher state of energy in addressing reproductive health. Though the ICPD claims to understand the connections between population, development, poverty, patterns of consumption and production, it does not explain what the connections are or should be (Balakrishnan, 1996). Improving reproductive health will not be achieved with machines, devices or drugs without taking into consideration the human and social environmental elements. Changes in behaviour and social attitudes are often needed to achieve lasting improvements in health (WHO 1987). The willingness of governments, local communities, the non-governmental sector, the international community and others to integrate population concerns into all aspects of economic and social activity will greatly assist in improving the quality of life for all individuals and future generations (United Nations, 1994).

As noted by UNECA, the MDGs are far from being the only solution to the development challenges of any specific country. This set of Goals, ranging from getting more girls into school to better environmental management, work to kick-start a development that takes into account the links between different sectors and needs. Unlike past donor-driven development programmes, this time each country is responsible for working out the details of comprehensive development frameworks and funding strategies (UNECA, 2005).

Once considered a public health issue only, the issue of maternal mortality is increasingly connected to the status of women in society. Employment, finance and education are at the root of this dilemma.



### **2.4.3 Nigeria Health Institutional Setup and Reproductive Health Policy**

The health sector in Nigeria has witnessed several policy and institutional reforms, aimed at improving the health care delivery system, particularly since the enunciation of the National Health Policy and Strategy to achieve health for all Nigerians (NHP) in 1988 (Aregbeyen, 2001). Many of the health care programmes aimed at reducing morbidity and mortality, conceived during the eighties under the influence of the “trickle down” development philosophy and even recent years, appear to have made little or no impact in reducing mortality levels (HERFON, 2006). Importantly, the issue of women’s health did not attract much attention (both in health policies and in health research) until in the recent time (Aina, 2012). Efforts had been largely fragmented and had not taken into good account the interdependency of the different stages of life. For a long time, health research (especially in the area of maternal and child health) in Nigeria focused more on child health at the neglect of the woman’s health. Even when the health of the woman is targeted, it remained at the level of reproductive health with particular emphasis on family planning. At the level of policy, the Nigeria’s health policies since 1946 showed that the focus was largely on the provision of capital intensive facilities (e.g. hospital infrastructures), and physical-oriented curative services (Aina, 2012). Hence, the country recognized the need for reforms to address the interrelated health problems.

The goal of the revised National Health Policy (NHP) is to establish a comprehensive health care system, based on primary health care that is protective, preventive, restorative and rehabilitative to every citizen of the country, within the available resources (Federal Ministry of Health, 2004). The response of the Nigeria government to gender issues in the health sector culminated into a plethora of policies. Notably, to meet the goals and the targets of the MDG goals.

The NPH places emphasis, as part of its implementation on the provision of comprehensive maternal and child health (MCH) services with the objective of reducing maternal morbidity due to pregnancy and childbirth by 50% (Soyibo, 2005; FMH, 2004). Some of the policies include, the provisions of the National Reproductive Health

Policy and Strategy of 2001, the National Policy on HIV/AIDS, 2003, the National Health Policy and Strategy, 1998 and 2004. Also, National Policy on Women, 2000 and 2004, National Policy on the Elimination of Female Genital Mutilation, 1998 and 2002, the National Adolescent Health Policy, 1995, National Policy on Maternal and Child Health, 1994, and the National Policy on Population for Development, Unity, Progress and Self-reliance, 1988 and 2004, constitute the key policy frameworks that seek to achieve quality reproductive and sexual health for all Nigerians (Ladan, 2006). These efforts, according to Aregbeyan 2001, have in essence been a vindication of government's readiness to demonstrate its real commitment to the attainment of the desired goals of a level of health that would enable all Nigerians to achieve socially and economically productive lives.

Despite the efforts listed above, maternal health statistics still appear shocking. In all the states, several challenges in policy evolution with respect to maternal health remain (Okonofua, 2010). As emphasized by Osungade and Ige (2011), there are deficient policy guidelines and implementation at macro-and micro health system level. These include the lack of purposefully designed strategic plans for implementing maternal health care, inadequate budgetary allocation to health and to maternal health, inadequate financial allocation for the implementation of free maternal health care, lack of appropriate monitoring and evaluation mechanisms, and the absence of data collection procedures for maternal health indicators (Okonofua, 2010). In addition, health policy development is usually not evidence based. This is because policy makers are often poorly informed of, and insufficiently involved in the use of research in policy development (Osungade and Ige, 2011).

Findings by Cockerham and Scamber (2010), have established the importance of social environment as a health determinant, shifting the focus away from the medical, individualistic, and problem-oriented approach to a population-level view of health. At such a level of analysis, individual differences in health do not appear to be random, but rather to be patterned by socio-economic status. According to the World Bank (1994) as cited by Aregbeyen (2001), the essential elements for creating an enabling environment

for better health, especially in developing countries such as Nigeria, include among others the following human basic needs input: safe water and sanitation, food, security and nutrition, health care, especially primary health care, education especially that of women, purchasing power, decent housing, family planning and cultural considerations. Scholars have therefore come to recommend that, to truly address health inequalities, policy agendas will have to tackle not only the social determinants of health, but also the determinants of social inequality that shape the myriad ways in which social advantage cumulates over the life course and across generation (Cockerham and Scamber, 2010).

Nnamuchi (2007) opined that one of the major criticisms against health system governance in Nigeria is a lack of coordinated response to critical health sector needs. For instance, according to Koblinsky, Campbell and Heichelheim (1999), the medical interventions for specific maternal complications that are needed to address maternal mortality are well understood; however, less clear is how to create the enabling health systems and policy environments to implement these interventions. Needless duplication of efforts in the past has led to redundancy and waste of resources that could have yielded greater dividend had they been employed elsewhere (Nnamuchi, 2007). Lule *et al*, (2005) affirmed that even when technical interventions are available and in place, maternal mortality levels may not fall proportionately, indicating the influence of the broader environment of health systems and policy on the delivery of health services. “Perhaps the enormity of the challenges was the impetus for the surge in the number of health-related agencies and programmes but rather than quality output, the result was overlapping functions and stagnation” (Nnamuchi, 2007 pg. 8).

According to the United Nations (1996), population policies and legislation have a major role to play in the creation of a supportive environment for reproductive health and maternal health. Many countries with high maternal mortality lack appropriate policies to improve education, health, transport, and energy sectors (Lule *et al*, 2005). The reproductive health and family planning programmes are usually a major component of national population policies and strategies. Strengthening their links will make them mutually supportive and thus enable national programmes to better satisfy

unmet demands through the delivery of high quality reproductive health and family planning services (United Nations, 1996).

Countries face a pressing need for national-level policies that improve the functioning of health systems as a whole and that foster multisectoral linkages among the ministries of health, education, social protection, and transport (Lule *et al*, 2005). Health policy must be focused on the determinants of health. Ministries and government agencies must be involved in the implementation as an integral to creating equity in health. As such, government policy that is not only focused on reduction of maternal mortality, but on the equity of health care for all, will translate not only into the presence of frontline providers close to women's home, where most births occurred, but also into support infrastructure for these providers that include the capability to manage and refer complications (United Nations, 1996).

Another setback that is noticeable to Nigeria health system is what is observed in Kickbusch (2006): the majority of policy makers continue to frame health in terms of expenditure and consumption of healthcare services. Very few institutions and funding programmes clearly differentiate between programmes that focus on health and its determinants and those that focus on healthcare.

Much more attention should be given to the individual situation of a pregnant woman and her family. Banerji in Kowalewski, Jahn, and Kimatta (2000) emphasized the identification of overlapping areas between professional and community perception of health needs as most important, because interventions in the overlapping area are much more likely to be accepted and to succeed. In this context, the identification of community perceived dangers in pregnancy and childbirth gains importance and provides the starting point for the development of appropriate individual delivery plans as suggested in the mother-baby package of WHO (Kowalewski, Jahn, and Kimatta 2000). According to the findings by Izugbara and Ukwai (2004), women and girls are aware of the need for good reproductive health. They seem able to recognize illness signs and seek cures from providers viewed as capable of managing their conditions. Women's ability to recognize signs and symptoms of illness conditions is a useful

resource to be harnessed for the effective integration of these segment of populations into current health-schemes and in efforts to foster positive health orientation. However, political will is needed to ensure the sustainable and proper blending together of these components, their delivery in culturally-acceptable doses, and the development of frameworks for delivery that meet constantly evolving needs. Policies should be oriented to meet the specific needs of individuals particularly those belonging to the vulnerable social groups.

## **2.5 SOCIO-CULTURAL CONTEXT OF MATERNAL HEALTH**

### **2.5.1 Stress**

The concept of stress has become so much part of common culture that it does not seem to need definition. There is now ample evidence that psychosocial stress results in health impairment, the experience also causes negative changes in health behaviour that contributes to the stress-illness relationship (Stroebe, 2000). There are three types of stressors: physical, psychological and social. Physical stressors are external factors such as drug, pollutant, bacteria, radiation, trauma, noise and exercise. Psychological stressors are intense emotions and include: anxiety, fear, frustration, guilt, worry, anger, hate, jealousy, sadness, self pity, and inferiority feelings. Social stressors are externally induced and result from interaction of a person with the environment (Morse, 1982).

Stress can affect health directly through changes in the body's physiology. Stroebe (2000) describes the function of physiological reaction to stress, which to him appears to prepare the organism for action. If one assumes that bodily injuries frequently occur in a context in which an animal has to fight or flee, it makes sense that the stress responses consist mainly of catabolic processes, that is, processes involved in the expenditure of energy from reserves stored in the body. It is therefore not surprising that the *sympathetic-adrenal-medullary system* and the *pituitary-adrenocortical system* are the two major neuroendocrine systems that are responsible for many of the physical changes

associated with stress. Endocrine refers to the internal secretion of biologically active substances or hormones.

Activation of the *sympathetic-adrenal-medullary system* leads to an increase in the secretion of two hormones, *norepinephrine* and *epinephrine*. The release of these catecholamines stimulates cardiovascular activity and raise blood pressure. The heart beats faster, increasing the amount of blood pumped with each beat. Every day, stressful event such as domestic violence, overwork, caring for other children, or the death of a loved one may trigger unhealthy ways of coping such as smoking, not eating, or making poor dietary choices that can impact health. But stress, by itself, is a risk factor (Cedars-Sinai, 2010).

Becoming pregnant, especially for the first time, is one of the greatest changes in a woman's life and, as change induces stress, it can be one of the most stressful periods for a woman (Morse, 1982).

*... when physical or emotional stress builds up to uncomfortable levels, it can be harmful for pregnant women. In the short time a high level of stress can cause fatigue, sleeplessness, anxiety, poor appetite or overeating, headaches and backaches. When a high level of stress continues for a long period, it may contribute to potentially serious health problems, such as lowered resistance to infectious diseases, high blood pressure and heart disease. Studies also suggest that high levels of stress may pose special risks during pregnancy (March of dimes, 2010).*

According to Cedars-Sinai (2010), stress is a cause of preterm birth, and a history of stressful events prior to pregnancy and during the prenatal period may lead to premature labour and birth. Studies (Schetter and Tanner, 2012; Brown *et al*, 2011; Mulder *et al*, 2002) also suggest that high level of stress may contribute to other pregnancy complications. Stress has been hypothesized to stimulate neuroendocrine mechanisms which culminate in increased uterine irritability and cervical changes. It can also alter immune functions and as a result, lead to increased susceptibility to intraamniotic infection or inflammation. In addition, it may induce high-risk behaviours as a means of

copping (Anachebe, 2006). One study assessed married pregnant women of similar age and social status that had deliveries in the same hospital. The result showed that those women who had the most social stressors had about three times the frequency of complications of pregnancy and delivery (Morse, 1982). A few studies suggest that women with stressful jobs may be slightly more likely than women with low-stress jobs to develop preeclampsia (a pregnancy-related disorder that includes high blood pressure and can result in poor fetal growth and other problems) (Walker, 2001). Also, pathological vomiting (*hyperemesis*) occurred in pregnant women who had repeated severe life-stress events (social stressors) as contrasted to nonvomiting pregnant women who did not have many stressful episodes.

### **2.5.2 Educational Status**

Education is a factor which offers the possibility of affecting the magnitude of maternal mortality in a number of different ways (Oxaal and Baden, 1996). The influence of education on health is assumed to derive from various dimensions of the educational experience; schooling imparts literacy skills, which enables pupils to process a wide range of information and stimulate cognitive development (Idowu, Osinaike and Ajayi, 2011). The knowledge acquired as part of the school curriculum is clearly instrumental for informed decision-making and it largely shapes individual's interaction with the surrounding world (Holsinger, 1973). Schools are also important agents of socialization, with a crucial role in shaping attitudes, opinions and values, which serve as a medication against fatalism.

Fatalism can take the form of a belief, that health problems are a punishment for an individual's lack of adherence to a set of behavioural rules, related to spiritual well-being (Family Care International, 1991). Exposure to new ideas and alternative lifestyles might lead to questioning of traditional norms and motivate greater willingness to adopt innovative behavioural models (Idowu *et al*, 2011). Attitude creation and attitude change are not only linked to the explicit content of the school curriculum but also to the informal, implicit processes connected to the organization of instruction (Holsinger,

1973). Educated women may have more understanding of the physiology of reproduction and be less disposed to accept the complications and risks of pregnancy as inevitable, than illiterate or uneducated women (Oxaal and Baden, 1996). As Graczyk (2007) puts it, lack of education can also affect health when it limits young women's knowledge about nutrition, birth spacing and contraception. For instance, as at 2004, 41.6 million Nigerian women had no formal education while 21.4 million had primary education. 31.1million had secondary education while only 5.9 million had higher education [National Population Commission Nigeria and ORC Macro, 2004). Before a woman decides to seek care, she must be able to recognize the signs and symptoms that indicate the need for care (AbouZahr 1994; Manderson 1994; in Kitts and Roberts, 1996). However, a lack of educational opportunities might lead to poor understanding of health-related matters; therefore, many women may not be familiar with different diseases and their presentation (Idowu *et al*, 2011).

According to Jegede (1998), education is a catalyst in terms of acceptance of modern health care services. Through change in women's social status, self image and decision making powers which may be key in reducing their risk of maternal death, resulting from early marriage and pregnancy or lack of information about health services (Oxaal and Baden, 1996). Findings from numerous studies (Kitts and Roberts, 1996; Gupta, 1997; Falkingham, 2003; Ogujuyigbe and Liasu, 2007) on maternal health care and mortality conducted in developing countries over the last decade show a positive association between maternal education and maternal health care (Idowu *et al*, 2011).

A study in Shanghai, China found that a majority of women didn't know first care-seeking should be done within the first trimester of pregnancy. A large number of women subjects did not know how to handle possible urgent problem at home, almost 40 percent of them didn't know correct actions after amniotic fluid breaks. Nearly half of the participants did not know the effects of iron-rich food on preventing anemia (Zhao, Kulame, Gao and Xu, 2009).

Men, who are more likely than women to be literate and to have better access to information, and in a better position than women to inform themselves about



reproductive health, do not show interest because reproductive health, including everything that has to do with pregnancy, childbirth and others, is considered to be a women's concern. Husbands ignore women's health care during pregnancy except for appreciating the need for a nutritious diet. While they advised women to reduce their workload, they generally do nothing to help, except in some cases where they assist with household chores. Childbirth was seen as women's concern, and men were generally unaware of any problem (UNFPA, 2000).

### **2.5.3 Economic status**

A large number of studies have shown that a woman's position in the household largely determines her range of acceptable reproductive options (Orubuloye and Ajakaiye, 2002; Das Gupta, 1997; Falkingham, 2003; Ogujuyigbe and Liasu, 2007). A Women's status is a broad concept that encompasses multiple facets of women's lives. It has been defined as the degree of women's access to (and control over) material resources (including food, income, land and other forms of wealth) and to social resources (including knowledge, power and prestige) within the family, in the community and in society at large (Dixon, 1975).

Opportunity cost and financial problems related to the situation of being far from home (extra money for food, shelter and clothes) are the main causes of the maternal health (Kowalewski, *et.al.* 2000). Given the limitations on women's earnings in both formal and informal employment, and their complete exclusion from the cash economy in some cases, the extent to which poor women, particularly those who head households, can afford expenditures (associated with health care) such as taking enough rest, and eating balanced diet is questionable. Because of their economic status women overwork themselves to support the family, and this has adverse effect on their health. Azim and Lotfi (2011) found that, association between SES and health stems, in part, from experiencing greater stress, either perceiving that demands exceed abilities to cope, or by exposure to life events that require adaptation.

According to the United Nations (1991), women who become pregnant in developing regions face a risk of death due to pregnancy. Among the reasons is the fact that malnutrition is endemic among pregnant women. Poverty is a major cause of maternal mortality, as it prevents many women from just not seeking antenatal care, but also taking time to rest and eating balanced diet which are essential to safe pregnancy are absent (Lanre-Abass, 2008).

When a woman is malnourished, it results in anemia which increases the woman's susceptibility to illness, pregnancy complications and maternal death and ultimately leads to high death rates. For this reason, women in their reproductive years require three times as much iron a day as do adult men. Because anaemia starves the body of oxygen, it makes women tired and restless. It also increases the danger of hemorrhaging and other complications in childbirth. The correlation with maternal mortality is clear. A woman stunted from poor eating and weakened by anaemia starts pregnancy in poor condition. Malnourished women are sick more; have smaller babies and die earlier. And where infant and child mortality is high, birth rates are also high, increasing the stress on women's bodies and trapping them and their children in a cycle of poor health and nutrition (United Nations, 1991). Also, in a research by Joseph *et al.* (2007) it was reported that lower family income is associated with increased rates of gestational diabetes, and post-neonatal death despite health care services being widely available at no expense.

#### **2.5.4 Culture and Health**

Culture influences health behaviour in so many dimensions. For instance, culture influences the way in which illness is acted upon in Nigeria (Dawitt, 1994 as cited by Kitts, and Roberts, 1996; Erinosh, 2005). Cultural factors include gender norms, child marriage and early pregnancy, nutritional taboos, particularly during pregnancy, certain birthing practices, female genital mutilation, and widow inheritance. The result for individual women and girls is mitigation of their health or their quality of life. What all these practices have in common is that they evolve from, or are in reaction to, the

preference for male children (Dawitt, 1994 as cited by Kitts and Roberts, 1996). These factors condition women's reproductive intentions; that is, the number of children they want and how they want their births spaced. Women do not always get the support they need to fulfill their reproductive intentions. In some settings fearing reprisal from disapproving husbands or others, many resort to clandestine treatment, especially in the use of family planning (UNFPA, 2000). Therefore, cultural restrictions limit choice. Belief about appropriate behaviour can reduce access to health information and care and impair its quality. Direct taboos and indirect restrictions deter women from discussing their health needs and risks, while women who cannot read or readily associate with others have difficulty finding health information and taking healthy steps toward safety in pregnancy. "Women are controlled with those local customs, whereby a woman can make no decision by herself, until the husband has decided" (Kowalewski *et.al*, 2000).

These restrictions mean that women are dependent on the decisions of others about medical attention; whether to delay or prevent pregnancy; have antenatal examinations during pregnancy or arrange for skill delivery attendant. It can be difficult for women to raise reproductive health concerns; topics such as menstrual bleeding irregularities are especially hard to discuss. Women may be unable to get their problems addressed until their conditions are serious and treatment options are more restricted and costly (UNFPA, 2000).

### **2.5.5 Belief System**

It has been argued that perception of illness is affected or influenced by different belief systems in societies (Jegede, 1998; Kitts and Roberts, 1996). As Nwabuaeze (2003) has explained, the social perspective on health has it that though the presence of disease may be a biological phenomenon, the culture of the people may sometimes contain anti-health social habits. For instance, most of the time they rely on home remedies to solve minor problems. Jegede (1998: 41) has observed that "it is not all the time you go to the hospital. In those days our grandparents used to single-handedly handle their wards' medical problems without much recourse to any external help." The common problems that can greatly increase women's risk in child birth are: delays in recognizing a

developing problem; delay in deciding to act; and delay in reaching services because of erroneous belief about pregnancy. In a study by Idowu (2011), majority of women believed that maternal health challenges are normal during pregnancy and as such are not so disposed to proper and adequate antenatal care.

#### **2.5.6 Age at Marriage**

Age is measured in chronological terms beginning at a person's date of birth. The concept of age indicates a structured nature of social relationship whereby interaction is hierarchical. Age connotes the idea of superiority in terms of ability to think and make decisions (Jegade, 1998). Age also determines the readiness of the physiology of the mother. According to Ufford and Menkiti (2001) and the 1999 Nigeria Demographic and Health Survey (DHS), many maternal deaths occur because of early childbearing. Adolescents suffer disproportionately from complications related to childbearing because their bodies are not fully developed (Idowu *et al*, 2011; Ufford and Menkiti, 2001). High fertility means women are exposed more often to the risk of maternal death. Galadima, the regional manager of the Abuja-based Society for Family Health (SFH), in Abdul'Aziz (2008) also affirmed that a woman should not start having children too early in life because if a woman's body is not ready to receive pregnancy, there is the likelihood of complications. Definitely the under aged women are more susceptible to maternal morbidity and, according to Graczyk (2007), they are not likely to be able to discuss their reproductive health with their husbands or to seek health care.

#### **2.5.7 Role Conflict**

Over the last two decades, researchers have drawn attention to the intersection of work and family, arguing that there is a reciprocal relationship between the two spheres of social life that often results in conflict and tension (Runte and Mills, 2004).

Women are often expected to occupy a number of roles at the same time: wife, mother, homemaker, employee, or caregiver to an elderly parent. Meeting the demands of so many roles simultaneously leads to stressful situations in which choices must be prioritized. Women are exposed to conflicting expectations that arise from the fact that

they occupy two positions simultaneously (Mordi and Ojo, 2011; Fadayomi, 1991). Women are often forced to choose whether to pursue or further a career versus whether to devote more time to home and family. On the surface the modern workplace and home-life appear to stand in sharp distinction to one another. The workplace seems to epitomize the modern concern with bounded time and the necessity of effective 'use time' (e.g., efficiency, effort, organizational commitment, and speed-up) (Runte and Mills, 2004). Home-life, on the other hand, is characterized by idealized images of the affective domain and relief from the pressures of work. Yet the reported experiences of working people seem to belie this supposed duality (Doyal, 1995; Runte and Mills, 2004).

Omideyi (1990) revealed the existence of conflicts which individuals in monogamous marriages experienced in coping with competing claims of their own kin, of spouses and of children on their loyalties and support in the quotation below:

*Psychological stressor that may be induced is frustration. Frustration results when a person is blocked from achieving a goal and feels annoyed, confused or angry. It has been stated that married women find their position in society to be more frustrating and less rewarding than that of married men. A man typically has two possible sources of gratification, his family and his work. Women usually have only one, the family. Even when a married woman works, she often has a less satisfactory job and generally has to take care of the housework. Aside from the marriage situation, women have frustration of an even more intense nature when they have to choose between two important goals. The choosing of either alternative results in frustration in regard to the other (Morse, 1982, pg 24-25).*

When women do choose or are required to work outside the home, they continue to perform the bulk of household duties as well (Encyclopedia of Mind Disorder, 2009). Rosenfield reported that compared to men, women perform 66% more of the domestic work, sleep one-half hour less per night, and perform an extra month of work each year. Needless to say, increased workloads and decreased attention to rest and relaxation are stressful and pose obstacles to women's health (Mordi and Ojo, 2011; Rosenfield, 1999).

Runte and Mills (2004) have observed that the relationship between hours worked and perception of work-family conflict also reflects women's subject position within the dominant discourse of family and the stress inherent in violating the role of the 'good mother'. Women work right up to the time of labour. Many married women find that they have little free time. When they get home, they generally still have to do many of the household chores. Unless they get adequate help, they have little time left over for leisure-time activities. What often happens is that half of the weekend is devoted to house chores with only Sunday left for leisure (Morse and Furst, 1982; Stroebe, 2000). To maintain the myth of the 'good mother', the female must satisfy either her work commitment or her family commitment in fewer hours, or sacrifice sleep. The tolls paid by women to maintain this illusory balance is their health (Runte and Mills, 2004). However, its negative impact on women's health is greater in the developing world (Idowu *et al*, 2011), and it also connotes a cultural value of male dominant role in patriarchal societies (Jegede, 1998). This reduces the promptness with which medical assistance is obtained anytime an illness is suspected during pregnancy (Idowu *et al*, 2011). Therefore, because of their heavy household duties, women cannot afford to be sick themselves; "It would be useful to discover how many ailments exist among women but never receive attention from the medical profession" (Idowu *et al*, 2011; Kitts and Roberts, 1996). Women's workload may affect the intermediate factor of health status increasing risk of maternal death. Many women have a workload that consists of hard manual labour, responsibilities for housekeeping and childcare and cooking, collecting firewood and fetching water which may result in chronic fatigue and other health problems (Oxaal and Baden, 1996).

This burdens women with a mixture of reproductive, productive and service functions for which she gets little support or recognition and from which she gets either scarce or no economic benefit. Moreover, other family or community members rarely assume women's essential tasks when they are ill. Women therefore continue to perform necessary activities that are difficult to defer (Kitts and Roberts, 1996). Even if a woman notices symptoms of illness, she may completely ignore these signs because of other

competing demands. Women may believe that they cannot afford the “luxury” to take time out to visit a health centre or to have a period of incapacity because this would represent time and effort lost to other essential, and possibly more important, activities such as child care, food production, and paid employment (AbouZahr, 1994; Bhattacharyya and Hati, 1995, as cited in Kitts and Roberts, 1996). “A woman’s everyday routine is full of small waivers of herself that are acts of giving herself up to others” (Constanza Collazos V., Centro de Investigaciones Multidisciplinarias en Desarrollo, Cali, Colombia, cited in Kitt, and Roberts, 1996).

Although attitudes toward gender roles are now much more flexible, different cultures retain varying degrees of expectations regarding male and female behaviour. An individual may personally disregard gender expectations, but society may disapprove of his or her behaviour and impose external social consequences. On the other hand, an individual may feel internal shame if he or she experiences emotions or desires characteristic of the opposite sex (Encyclopedia of Mind Disorder, 2009). Gender role conflict, or gender role stress, results when there is a discrepancy between how one believes he or she should act based on gender role expectations learned in childhood and how one actually thinks, feels or behaves. If these discrepancies are unresolved, gender role conflict contributes to poor health (Encyclopedia, 2007). Doyal (1995) has suggested that patterns of women’s health and sickness may be explained in relation to main areas of activities which constitute women’s lives. Therefore, any analysis of women’s health should consider the interaction between social, psychological and biological influences.

#### **2.5.8 Working Condition**

Economic pressures on the households, including a rise in male unemployment, have led more women to seek paid work. Many households find that two incomes are required in order to sustain a desired lifestyle (Giddens, 2002). According to Gallie (2003), the nature of work tasks and work organization is crucial both to personal well-being and to broader social cohesion. Countless women lack access to decent work that would enable

them to rise above poverty and work in safe conditions. Many women workers have traditionally been concentrated in poorly paid, routine occupations. Many of these occupations fall outside traditional legal and social protection systems that safeguard against vulnerability and provide access to health care (ILO, 2010). However, in sub-Saharan Africa and South Asia, where the highest rates of maternal mortality are reported, more than 80 percent of women workers are considered to be working in precarious and vulnerable conditions, mainly; either in the informal economy, lacking maternity protection at work, or certain industries, like, medium size baby food, beverage and wine production companies that are always predominantly staffed with women. Not only are these women low paid, conditions in these factories are terrible. Women in these factories are mostly part time workers. The nature of these part time jobs is such that women work longer hours for less pay. The need to bring in or supplement family income forces women to submit to these conditions. This is nothing but double exploitation (Cheeqitita, 1999; ILO, 2010).

Women in many parts of the developing countries have been particularly affected by recent changes in economic policies for the recent deregulation in the oil sector in Nigeria. This situation has forced women to increase the number of hours in extra-domestic activities and household task. International Labour Organization (ILO, 2010) clearly states that, while most attention to maternal health and mortality has justifiably focused on health services and family planning, mothers are also workers, with particular need of support to protect their health while working and to ensure their economic security during pregnancy and after childbirth. Available evidence demonstrates that in many developing countries women averagely work more hours per week than men when unpaid work and household activities are taken into account (United Nations, 1991; Basu, 2001). The problems associated with maternity and child birth are closely linked to poverty, inadequate working conditions and gender inequality (ILO, 2010). For instance, for a woman, work is demanding more time. More time spent at work means less time available for family life and rest. Where women have paid job, as it has been recognized by Giddens (2002), companies are attempting to become more efficient and streamlined, jobs are cut or ‘downsized’, and many employees experience



anxiety about the security of their positions. High expectations for job performance (either self-imposed or imposed from above) mean that employees are working harder and putting in longer hours. The stress on the individual behaviour of women tends to create unrealistic expectations for mothers and can result in increased demands on their time (Garcia, 2002).

Meanwhile according to ILO (2010), the importance of paid work in the lives of so many makes the quality of working conditions paramount to the reproductive health of women as well as men. Hostile working environment affects both men and women workers. However, there are gender specific dangers to which women workers, because of their biological makeup, are exposed. These dangers severely affect women's physical and reproductive health. Women work in environments and conditions that threaten pregnancy (Cheeqitita, 1999). Indeed, poor working condition; such as low wage, long working hours and lack of adequate weekly and annual rest; in addition to unhealthy and hazardous workplaces and lack of social protection, can have negative effects on maternal health (ILO, 2010). It is more elucidate with following quotation:

*Working during pregnancy is not in and of itself a risk. But women around the world continue to face considerable maternity related threats to their health and economic security. Work place environments can pose hazards (e.g. exposure to pesticides, solvents and other chemicals); requirement of physically demanding work, and irregular or long working hours; all can have potentially negative effects for the health of pregnant women and their fetuses, including greater risk of preeclampsia and hypertension, complications during pregnancy, miscarriage and stillbirth, foetal growth retardation, premature birth and other problems. Tasks requiring being in one position for long period of time, can adversely affect reproductive health (ILO, 2010. [www.2.ohchr.org/englis/issues/women/docs](http://www.2.ohchr.org/englis/issues/women/docs)).*

As stated by Oxaal and Baden (1996), the last three months of pregnancy should be a time when the mother rests and gains weight. However, many women in developing countries continue with their full workload right up until the time of labour, and resume work shortly after giving birth. This can have an extremely detrimental effect on health.

### **2.5.9 Social Support**

The health impact of stressful events not only depends on the nature of these events but also on the individuals' ability to cope with the crisis and on the extent to which they receive social support from relatives, friends and other members of their social network (Stroebe, 2000).

In an impressive early survey, a relationship between social support and mortality was demonstrated. Berkman and Syme (1979) studied social and community ties among a random sample of both women and men whose age varied from 30-69. Each of the four types of social relationship that was assessed at that time independently predicted the rate of mortality over the succeeding nine years. Individuals who were low on an overall Social Network Index, and which weighted the intimate ties more heavily, had approximately twice the mortality risk of individuals who were high on this index over the nine-year period.

That conjugal relations have a bearing on other aspects of a woman's life in particular and on the well-being of the family in general cannot be disputed (Babalola, 1993). Indeed, such aspects of conjugal relations as the intimacy between spouses and decision making process can be expected to influence women's health. Studies have shown that conjugal role deprivation, which was reflected in strained relationships within marriage, was felt among the women either because they did not secure the kind of husband or the type of marriage they wanted or because of divorce or an unhappy current marriage (Omidoyi, 1990). Recently, findings from India also mirror the previous findings, in acknowledging the fact that, women who experience violence from their husbands are also less likely to have control over sexual activity or to be able to make decisions about the timing of childbearing, particularly in such a highly gender-stratified setting (Stephenson, *et al*, 2008). The feelings and fears experienced during pregnancy are intense and varied. These feelings and concerns are a normal part of pregnancy. Each woman comes to terms with the changes in her own way, with the support of her partner or family (Kitts and Roberts, 1996). The extent to which individuals perceive that

supportive others are available will affect the coping process. There is evidence that individuals who have a great deal of social support suffer a lower risk of physical impairment and mortality than individuals who have little social support (Stroebe, 2000).

According to UNFPA (2000), men can advance gender equality and improve their family's welfare by:

- **Protecting their partners' health and supporting their choices** - adopting sexually responsible behaviour; communicating about sexual and reproductive health concerns and working together to solve problems.
- **Refraining from gender violence** - themselves and opposing it in others, and promoting non-aggressive conceptions of male sexuality and masculinity.
- **Practicing responsible fatherhood** - supporting their partners in child-rearing and household task, protecting their children's health and investing in their future, teaching their sons respect for women's needs and perspective, developing open and supportive relationships with their daughters, and providing their children with accurate and sensitive information.

Other way by which men can advance maternal health is by protecting reproductive health outcome of their partner through discussions of sexual matters, family planning, and number of children. Given that men in African societies are dominant decision-makers, they decide and dictate most things and their wives are expected to abide by their decisions or perceived wishes (Isiugo-Abanihe, 2003). Social support from others, such as relatives, friends, and neighbours can play an important role in fostering the physical and psychological health of women (Kitts and Roberts, 2003) and can greatly influence the health-seeking behaviour of women.

Abdul'Aziz (2008) has noted that family support networks are generally weaker in cities than in villages, leaving many women without support of the extended family in obtaining adequate antenatal and obstetric care. Social heterogeneity and stratification on the basis of ethnicity, occupation, neighbourhood of residence and place of origin,

and other features are typically more common in cities than in homogeneous villages, and may lead, at best, to selective provision of service to clients by practitioners, and at worst to poor or inadequate service as a result of discrimination.

These factors relate to circumstances that a woman finds herself that indicate whether she may be more susceptible to pregnancy related health challenges.

This review has provided how social circumstances contribute to maternal health complications in Nigeria. The central point to appreciate is that while medical service is important for enhancing maternal health, its reach and impact depend greatly on the socio-cultural context within which it operates. Reduction in maternal morbidity and mortality depends on many factors. The review of the literature was structured to examine these social factors.

The concepts of health, maternal health and the global efforts toward reduction of maternal health were explored. Such efforts include Safe Motherhood Initiative, International Conference on Population and Development (ICPD), and Millennium Development Goals (MDGs). Also, the various medical causes of maternal mortality were examined.

Some of the social factors as conceptualized in this review include: Stress, economic status, educational status, culture, beliefs, age at marriage, role conflict, working condition and social support.

There are evidences that the socio-cultural factors within which pregnant women operate serve as a set of distant factors underlying maternal health complications, acting on the proximate factors.

## **2.6 THEORETICAL FRAMEWORK**

To interpret the research data and integrate them within a cohesive body of knowledge, this study has adopted a theoretical framework that synthesizes interrelated theoretical perspectives: Structural Functionalism, Agency-structure theory and Gender and Development Theory. The logic of these frameworks is anchored on the strength of each perspective and how they all fuse into one complete whole to explain maternal health. Functionalism is adopted because of socio-cultural factors as social facts that constrain people's behaviour. Agency-structure theory provides explanations on how people respond to societal demands by manipulating the system to their own perceived advantages and the Gender and development theory because obviously, only women can suffer from maternal mortality. Therefore, it explains the situation of women based on the position they occupy as women.

### **2.6.1 Structural Functionalism**

Functionalism is a theoretical perspective which traces social order to biological root. It views society as a system made up of interrelated parts which together form a whole (Haralambos and Holborn, 2008). Technically, the popularity of functionalism steadily declined from mid-1960s partly due to changes in ways of approach. However, its contributions to the understanding of how social life was maintained cannot be denied. The philosophical postulations of functionalism can be summarized by a comparison drawn from biology.

Functionalism focuses on the structures of society and their functional significance (positive or negative consequences) for other structures. The primary concern of functionalism is the large-scale social structures and institutions of society, their interrelationships, and their constraining effects on actors (Ritzer, 2003).

A functionalist is concerned with the relationship among the larger-scale structures of society, for instance, the educational system and the economic system. The focus is on the functions that each provides for other. For example, the educational system provides trained personnel needed to fill occupational positions within the economy. The

economy, in turn, provides such positions for those people who complete the educational process. This allows the educational system and its students to have an objective in mind at the end of the educational process. Although this offers an image of a positive and close-fitting relationship between social structures, it need not necessarily be that way (Ritzer, 2003).

The basic idea goes back beyond economics to the old biological analogy in which society is one large body. If biologists wanted to know how an organism such as the human body worked, they might begin by examining the various parts. However, if they simply analyzed the parts in isolation from each other, they would be unable to explain how life was maintained. To do this, they would have to examine the parts in relation to each other, since they work together to maintain the organism (Haralambos and Holborn, 2008).

These social structures are interdependent. For a society to survive, its interdependent parts must function in harmony. Functionalists hold that survival depends on cooperation and that cooperation depends on consensus (agreement) on basic values and rules for behaviour. Under normal conditions the various parts of society work together toward shared goals, producing order, stability, and equilibrium. Viewed from this perspective, conflict is a symptom of “disease” in the social organism (Gelles and Levine, 1995).

### **The Function**

The function implies that each society has certain needs in that there are a number of activities that must be carried out for social life to survive and develop. Goods and services must be produced and distributed in order for people to survive, there must be some administration of justice, a political system must exist, and some family structure must operate so as to provide a means to reproduce the population and maintain social life on a daily basis (Ogunbameru, 2008). In the structural functional model, individuals carry out each of these tasks in various institutions and roles that are consistent with the structures and norms of the society.

## The Structure

Functionalist analysis looks on social systems as having certain needs, and society as a system of social structures. If the needs are being met, then it is the social structures that meet these needs. The structures are thus functional in the sense that they help society to operate (Ogunbameru, 2008). Interconnections exist within and among these structures, and individuals and groups are constrained by these structures.

This constraint is explained by Durkheim. That is, the societies of which we are members exert social constraint over our actions. He argued that society has primacy over the individual person. The social structure according to him, constrains our activities in a parallel way, setting limits to what we can do as individuals (Giddens, 2001). According to this formulation, constraint is no longer a simple imposition of outside controls on individual will, but rather a moral obligation to obey a rule. In this sense society is ‘something beyond us and something in ourselves’ (Otite and Ogionwo, 2006).

In Talcott Parsons’ functionalism, the concept of adaptation signifies that a system must adjust to its environment and adjust the environment to its needs. More specifically, a system must cope with external situational dangers and contingencies. A system cannot remain long at odds with its environment. If it did, it would be in grave danger of perishing because of the lack of fit. The main idea of functionalism is its focus on the question of how social systems are maintained.

However, in Merton’s view, functions are defined as observable consequences that help a particular system adapt or adjust. However, there is a clear ideological bias when one focuses only on adaptation and adjustment, for the consequences are always positive. It is important to note that one social structure can have negative consequences for another social structure. To rectify this serious omission in early structural functionalism, Merton developed the idea of a *dysfunction*. Just as structure or institutions could contribute to the maintenance of other parts of the social system, they also could have negative consequences for them; they could have an adverse effect on the ability of

those parts to adapt or adjust (Ritzer, 2003). He contended that not all structures are indispensable to the workings of social system. Some parts of our social system can be eliminated. If there are aspects of a people's culture that are injurious to their health or detrimental for societal progress, they can be discarded (George, 2010).

Therefore, there is the need to study maternal health from an emic perspective through critical analysis. Within the theoretical framework, maternal health and its attendant complexities cannot be fully understood by some universal variables. Rather, the social and cultural context that sustains it must be understood from a particularistic exploration.

This theory shows the capability of larger society to create stressful situations where people are forced to respond to conditions not by choice. Functionalism helps us to recognize that macro-level social events (like economic recessions) can affect health in a variety of ways through stress and that the effects of stress can be mitigated through social supports (Cockerham and Scrambler, 2011). The theory explains how illness, health and health care affect and is affected by other aspects of social life. The functionalist perspective draws attention to latent dysfunctions, or unintended and often unrecognized negative consequences of social patterns or behaviour. For example, poverty led to increase in women's involvement in labour force participation and has resulted in maternal health concern which is now a major threat to maternal health.

According to this perspective social change involves structural change and not a change in the basic functions of social systems (Kakepoto, 2008). No doubt, social change has a direct impact on the basic structure and functions of the social institution. Even though technology has elevated the status of women in the family, it has put the fabric of the social relationships at stake. This can be responsible for much distress being witnessed in maternal health. Some interventions have also increased the level of poverty and therefore widened the inequality in recent years. In this light, political, economic and other social structures within society hinder women from meeting their health needs and reaching their full potential.



### **2.6.2 Agency Structure Theory**

This study uses structuration theory in the light to understand human agency and that of social institutions. Structure highlights two main components, structure as an environment that transforms mothers' lives and structure as the scope for governments and other contributing partners in scaling up interventions, while agency generally refers to individual human actors.

One of the best-known and most articulated efforts to integrate agency and structure is Anthony Giddens's structuration theory (Ritzer, 2008). At its core Giddens's structuration theory, with its focus on social practices, is a theory of the relationship between agency and structure. The very heart of the theory of structuration is "intended to illuminate the duality and dialectical interplay of agency and structure". Thus, agency and structure cannot be conceived of apart from each other; they are two sides of the same coin (Ritzer, 2003). All social action involves structure, and all structure involves social action. Agency and structure are inextricably interwoven in ongoing human activity and practice.

As pointed out, Giddens's analytical starting point is human practices, but he insists that they be seen as recursive. That is, activities are not brought into being by social actors but are continually recreated by them via the very means whereby they express themselves as actors. In and through their activities agents produce the conditions that make these activities possible (Giddens, 1984). Thus, activities are not produced by consciousness, by the social construction of reality, nor are they produced by social structure. Rather, in expressing themselves as actors, people are engaging in practice, and it is through that practice that both consciousness and structure are produced. Giddens is concerned with consciousness, or reflexivity. However, in being reflexive, the human actor is not merely self-conscious but is also engaged in the monitoring of the ongoing flow of activities and structural conditions (Giddens, 2001).

This study uses agency structure theory in order to acknowledge that women are agents who have knowledge and skill and can therefore form a structure among themselves.

Structure, on the other hand is the environment in which women live that is filled with processes and social systems which enable women to have power and act within their own agency. The conceptual core of Giddens's structuration theory lies in the ideal of agency, structure, power, system, and duality of structure.

### **Agency**

Agency is a social agent that is primarily a reflexive actor capable of providing a rational justification for one's actions (Chipumbu, 2009). By rationalization, Giddens means the development of routines that not only give actors a sense of security but enable them to deal efficiently with their social lives (Ritzer, 2008). Agency basically refers to knowledge and skill. It is basically what individuals do on a daily basis and basically refers to micro level and at the same time the (macro) collectives that act together (Ritzer, 2003). Additionally, Giddens argues that these actions form social structure, which is the conglomerate of individuals' reproduced set of expectations (Vasquez, 2010). Burns, cited in Ritzer (2008), qualified agents as human agents being individuals and at the same time organised groups, organisations and nations. Thus, while rationalization and reflexivity are continuously involved in action, motivations are more appropriately thought of as potentials for action. Motivations provide overall plans for action, but most of our actions, in Giddens's view, are not directly motivated. Although such actions are not motivated and our motivations are generally unconscious, motivations play a significant role in human conduct (Ritzer, 2003).

### **Structure**

To Giddens, structure is the entirety of all social institutions; the social institutions of family, government, gender, class and so on (Vasquez, 2010). Structures are not just large scale social structures, but are structures that determine the conditions in which individuals are to react (Chipumbu, 2009). He argues that because structure is malleable and constantly being modified, structure ought to be considered in systemic form. That is to say, structure is made up of properties (rules and resources), and the only thing bonding structure together is the structuring properties that allow the binding of time-space in social systems (Ritzer, 2008; Vasquez, 2010). In other words, structure is

highly dependent on the moment in time that it exists. Structure is made possible by the existence of rule and resources. Structures themselves do not exist in time and space. Rather, social phenomena have the capacity to become structured. Situations and outcomes are as a result of human actions which refer to micro structures involved in human interaction. Structures can therefore be created and recreated through human agency (Ritzer, 2003). An individual agent has only an incomplete knowledge of either the empirical world or mechanism of society that structures his or her action (Chipumbu, 2009).

### **Power**

Consistent with his emphasis on agency, Giddens accords the agent great power. In other words, agents have the ability to make a difference in the social world (Ritzer, 2008). According to Giddens (1984), Action is embedded in all human beings and it is taken with knowledgability and consciousness. There is a reflexive monitoring of action which is basically the aspect of how an individual reacts to a situation and rationalizes his/her action by assessing themselves by asking questions like - why do I want to do it? which are basically one's own decision (Chipumbu, 2009). Power is another component of agency that gives human beings a right to act in a certain way. Human action implies that power is capable of producing an effect (Giddens, 1984). Giddens certainly recognizes that there are constraints on actors, but this does not mean that actors have no choices and make no difference (Ritzer, 2008). But power is in most cases constrained by lack of resources as agency can only be fulfilled if their capability is achievable and not just ending on the intentions that the individual has in achieving his goal (Chipumbu, 2009).

### **System**

Giddens defines social systems as reproduced social practice, or reproduced relations between actors or collectivities organized as regular social practice (Ritzer, 2008). Social systems are systems of social interaction; as such they involve the situated activities of human subjects, and exist in the flow of time. These systems are patterns of relations in

groupings of all kinds, from small, intimate groups, to social networks and large organizations (Giddens, 1984). Social systems are, therefore, not independent of the actor but they depend on social practices. Social systems are enduring cycles of reproduced relations that form social systems (Giddens, 1984). These systems could be families, peer groups, communities or cities, which can either be at a face to face level or existing via networks over space and time or be media or face to face interaction that forms encounters that contribute to systems (Chipumbu, 2009). While some social systems may be the product of intentional action, emphasis is placed on the fact that such systems are often the unanticipated consequences of human action. These unanticipated consequences may become unrecognized conditions of actions and feed back into it. These conditions may elude efforts to bring them under control, but nevertheless actors continue their efforts to exert such control (Ritzer, 2003).

### **Duality**

The concept of structuration is premised on the idea that the constitution of agents and structures are not two independently given sets of phenomena, a dualism, but represent a duality. The structural properties of social systems are both medium and outcome of the practices they recursively organize or the moment of production of action is also one of reproduction in the contexts of the day-to-day enactment of social life (Giddens, 1984). It is clear that structuration involves the dialectical relationship between structure and agency. Structure and agency are a duality; neither can exist without the other (Ritzer, 2008). Structuration, therefore, highlights this link between social formation and the individual actor that social life is constituted through social practices. These Social practices are the mediating concept between agency and structure and between individuation and society (Chipumbu, 2009). Structuration, therefore evolves and reproduces social structures which both enable and constrain each other (Ritzer, 2003).

### **Application of agency structure theory to the research problem**

Structuration theory in this study plays a role in analyzing the factors that shape the lives of pregnant women within the society (structure). The concept of embeddedness implies that it is impossible to detach the agent (women) from the structure (community, society, etc.). Thus, one of the issues that have received most attention in recent decades in sociological literature is the duality of agency and structure, and the integration of the two (Ritzer, 2003).

While the context (structure) enabled women (agents) to act, their actions alter the socioeconomic context (structure). In response to this apparent dichotomy and continuous dynamism, Giddens' (1984) structuration theory is an attempt to articulate a process-oriented theory that treats structure as both a product of and a constraint upon human action. Giddens tries to bridge the gap between deterministic, objective, and static notions of structure, on the one hand, and voluntaristic, subjective, and dynamic views, on the other, by positing two realms of social order and by focusing attention on points of intersection between the two realms.

Giddens' theory may help us to better understand how maternal health comes into being by directing our attention to a fundamental unit of analysis: the interaction between maternal health and the context. That interaction is crucial to understanding the process of maternal health complications. Thus, structuration theory provides a promising lens through which to examine to what extent the context enables and constrains maternal health, and further, given that maternal health is about social change, how social change occurs and under what conditions.

This study acknowledges that women are competent social actors who have a certain freedom of choice and action. Action, according to Giddens (1984), represents interactions that women have among themselves and institutions that shape them and react based on the way they are treated. They in turn create systems among themselves in order to survive based on their processes (societal norms and informal language) that

bind them together. Duality of structure is the reproduction of structure as all social action involves structure and all structure involves social action (Chipumbu, 2009).

### **2.6.3 Gender and Development (GAD) Theory**

A look at the different theories on gender and development can also provide good basis for this study. Gender is simply defined as the socially constructed roles of men and women in societies (Asante-Sarpong, 2007). The consistent failure of development plans, which, in congruence to critiques about feminist theories, has led to intersection of international development with feminism to produce a number of approaches to addressing women's issues (Annan, 2005). The theories basically try to explain the inequalities that exist between men and women when one considers their productive and reproductive activities. In different societies in Africa, the assumption is that women should be actively involved in reproductive activities than productive activities (Asante-sarpong, 2007).

The Women in Development (WID) movement that grew out of Boserup's work aimed at more efficient, effective development through incorporating women specific projects into existing development processes. Programmes informed by a WID approach addressed women's practical needs by, for example, creating employment and income-generating opportunities, improving access to credit and to education (Reeves and Baden, 2000). The approach has been criticized among others as it failed to address the gender relation between men and women as a major obstacle to women's full participation in their societies (UNIFEM, 2000; Asante-sarpong, 2007).

In the late 1970s, a new school of thought appeared in view of the criticism of WID. The Women and Development (WAD) perspective was developed. WAD argues that women have always been part of the development process but on unequal terms, and that women are suppressed only when development is related to modernization (Asante-sarpong, 2007). The new school of thought pointed out that development projects increased the demands on women without increasing their access to resources or

decision making power and in effect worked against women's interests (UNIFEM, 2000). WAD has also been criticized for taking for granted the gendered division of labour that existed both at the household level and at the international level. Nielson (2008) acknowledged that both WID and WAD approaches failed to address the underlying factors that have structured and maintained gender inequalities, focusing instead on the biological differences between women and men as the basis of women's subordination.

In the 1980s, Gender and Development approach (GAD) emerged as a response to WID and WAD deficiencies. The GAD approach recognised that the problems of women were perceived in terms of sex rather than in terms of gender, and viewed development dynamically. It looked at the relationship between men and women rather than maintaining a narrower focus on women. GAD examines how relationships and structures at both household and community levels affect women and men differently (UNIFEM, 2000; Valdez, 2008). The focus of GAD is on the social construction of gender role and gender relations. It is strongly believed that maternal health can, to some extent, be influenced by the role women themselves play in reproduction and production but also the social relations as determined by the society have a greater influence. This approach emphasizes the importance of examining the gender division of labour in specific societies, particularly the invisible aspects of women's productive and reproductive work, and the relationship between these labour patterns and other aspects of gender inequality (Annan, 2005). Thus while the WID approach focused on integrating women in development, the GAD approach seeks to empower women by transforming unequal relations between men and women.

*The major premise of the GAD approach is that both men and women create and maintain society and shape the division of labour. However, they benefit and suffer unequally. Therefore, although interventions may target men, women should receive greater focus because they have been disadvantaged. It also recognises that women and men socialise differently and often function in different spheres. Women have a triple role (reproductive and domestic, productive, and community work)*

*whereas men usually assume a double role in most societies. It also recognises that development affects men and women differently and women and men will have a different vision in the design of projects. The GAD approach stresses that both men and women should be equally involved in identifying problems and solutions if the well being of the community as a whole is to be served. The GAD approach thus strives to identify and address the practical gender needs of both men and women as well as identify and address their longer term strategic needs (UNIFEM, 2000: www.siyanda.org.).*

Against this premise, GAD attempts to address inequality as a by-product of gender construct. Based on the definition of gender as socially constructed, GAD proposes to influence society to change its attitudes towards women through massive structural changes that benefit both men and women (Valdez, 2008). As such, GAD links the relations of production to the relations of reproduction, taking particular challenges and responsibilities of women's lives into account (Dengu-zvogbo *et al.*, 1995). Besides, GAD recognizes that development is a complex social issue and advocates of this approach state that this paradigm takes a holistic approach, exploring the totality of social organization, economic and political life in order to understand the shaping of particular aspects of society (Annan, 2005).

This approach can explain this study because, maternal health can better be explained if we consider the roles regarding reproductive lives and some values, customs, norms and other institutional arrangement in the society that may influence maternal health complications. The GAD approach argues that women's status in society is deeply affected by their material conditions of life and by their position in the national, regional, and global economies (Nielson, 2008). Moreover, women's material conditions and patriarchal authority are both defined and maintained by the accepted norms and values that define women's and men's roles and duties in a particular society" (Connelly *et al.*, 2000: 62).

Central aspects of the GAD approach focus on the importance of addressing women's needs and interests in developing countries for improving their condition and position



(Nielson, 2008). The approach goes beyond women issues, to ways society assigns roles, responsibilities and expectations to both women and men (Aina, 2012). However, it draws a distinction between ‘women’s interests’, which are purely biologically determined (assuming homogeneity), and ‘gender interests’, which are socially constructed and can be divided into practical and strategic gender interests (Connelly *et al*, 2000). As there are more distinguishing characteristics in society than merely ‘men’ and ‘women’, ‘gender interests’ take into consideration other societal attributes such as class and ethnicity, whereas ‘women’s interests’ assume all women have the same interests because they are women. Only gender interests therefore concern GAD, because they acknowledge the possibility of women’s interests being determined by other characteristics (Moser 1993). Therefore, using gender analysis frameworks, the GAD approach helps to uncover implications of gender relations in productive, reproductive, and community management roles (Aina, 2012). These interests can then be translated into various needs when planning gender policies in developing countries, which become the means by which interests are achieved, distinguishing between the goals and tools of gender planning (Nielson, 2008).

Aina (2012) opined GAD approach uses a multi-dimensional approach to ‘women empowerment’, whereby women’s empowerment goes beyond changing women’s socio-economic conditions, to changing the system which continues to reproduce gender inequality in societies. Practical gender interests are related to women’s condition in society, and are therefore focused on more immediate needs for the specific situation they are in, without challenging their position in society (Connelly *et al*, 2000:63; Moser, 1993:40). Practical gender needs refer those needs of men and women as defined by their existing engendered roles within society. Practical needs are easily identified by women as essentials for daily life, such as food, housing and safety, and are specific to the situation in which women find themselves (Connelly *et al*, 2000:142). Addressing them can improve their immediate condition, but do not have an impact on the roots of the cause for them being in that situation in the first place (Nielson, 2008).

Strategic gender interests concern the factors causing women's subordinate position in society, and changing these requires changing the socially constructed structures that characterize women's position (Connelly *et al*, 2000; Moser, 1993). Strategic interests relate to vulnerable and disadvantaged positions in society that perhaps all women experience compared to men, but with varying degrees dependent on the number of other socially distinguishing characteristics, they are associated with (Connelly *et al*, 2000:142). In order for women to promote their strategic interests, practical needs must first be satisfied. Moser (1993) outlines a useful framework for understanding the different roles women and men have to fulfil in society: the Triple Roles Framework (reproductive, productive and community). He continued by saying that policy of a practical nature should assist women in the fulfilment of their roles, or at least should not make such fulfilment more difficult. Thus, in Aina (2012), empowerment should lead to concrete action that would bring about changes in laws, in access to resources and in public and private institutions that reinforce women's subordination. Achieving practical interests requires that all women are given the access and capability to getting their needs met, which means taking into account the different conditions women find themselves in and removing the barriers that stand in their way. If gender roles and gender needs are understood, planning is more effective, policies are more clearly defined and programmes and project are designed with the different needs of the people who are supposed to benefit explicitly taken into account (Payne, 2009). This will in effect improve the condition of their lives, but will not affect the factors causing their position, which is when strategic interests need addressing, by identifying both the practical - and strategic gender interests for maternal health in Nigeria.

#### **2.6.4 Synthesis**

The complex network of discourses concerning maternal health, the sites where they are articulated and the institutionally legitimized forms of knowledge to which we can base justification is presented here.

The antecedents for women form of inter-role conflict are well documented and assume a fundamental incompatibility between the roles expectations (Runte and Mills, 2004).

However, discourse is both an antecedent to, and heuristic for making sense of, maternal health outcomes. But beyond speaking and writing, human actions and behaviour reflect cultural metaphors that, when expanded, reveal a web of complex variables. It is within this context that maternal health is situated. Because these social structures are interdependent, change in one area of social life inevitably causes adjustments in other areas. For example, the changes in the economy bring about changes in the structure of the family. Likewise, changes in the family bring about pressure on women. According to this perspective, sudden and rapid change can throw the entire system off balance.

With this understanding, structural constraints limit women's choices and opportunities and are difficult for them to escape from as they are embedded in society; leaving them, to a great degree, powerless in the system they exist in. Structural constraints in society are, therefore, at the core of maternal health complication, constraining women from reaching their full potential and excluding them from equally enjoying human rights compared to others (Nielson, 2008).

While functionalists emphasized structures in place, the pressure of economic situation had forced a change in structure of the family. Through the power of reflexes, according to Giddens, within the framework of existing, unspoken rules and constraints, women tend to neglect lifestyle of confinement for procreation and home keep to adapt to the changes of socio-cultural, economic and political. At present, mothers are pushed by economic pressure so they must spend almost all their time on work outside the home thereby reducing the time for their rest and confinement.

Structuration theory is also about that fact that structure influences behaviour, but behaviour can reciprocally influence structure. This theory can, however, be applied to this study in the sense that maternal health complications can be influenced by mothers' personal reasons as well as by existing structures and institutions in the society. Women in this sense become the agent (human agency) and the structures can include culture, family, husband, economic situation, working condition and entire society at large. The reciprocal relationship suggests that women (agent) respond to societal demands by

manipulating the system to their own advantages. This allows us to explain maternal health behaviour within the societal constraints. Agency structure model is an important element in investigating the social context of maternal health but, sadly, strategies for the reduction of maternal morbidity and mortality have largely ignored the social phenomenon because it seems to fall outside the reach of predictable health efforts (Numer and Gahagan, 2009). For instance, because of high level poverty in Nigeria, women have little choice about engaging in economic activities and poor socio-cultural conditions make maternal health particularly important. Most women in African societies are aware of the potential risks involved in pregnancy and education efforts often rely on an underlying fear of death and illness. However, because of disruptive social circumstances, women still engage in risk-taking behaviour which can be seen to contradict the growing recognition of maternal health challenges. This suggests that women are both autonomous individuals making decisions regarding their health as well as subjects caught between two contradictory ways of talking about them that are embedded in the broader socio-cultural, political and economic maternal health promotion rhetoric.

The individual behaviour relevant to health is seen to be embedded and formed by aspects of everyday life, social relationships, and material resources. GAD approach argues that women's status in society is deeply affected by their material conditions of life and by their position in the national, regional, and global economies (Nielson, 2008). Central aspects of the GAD approach focus on the importance of addressing women's needs and interests in developing countries for improving their condition and position. This model outlines a useful framework for understanding the different roles women and men have to fulfil in society: the Triple Roles Framework (reproductive, productive and community). And, that, policy of a practical nature should assist women in the fulfilment of their roles, or at least should not make such fulfilment more difficult.

Specific health-related behaviours are the product of the interaction between individuals and social structures, and health promotion strategies aiming to reduce variations in

health must address the complexity and diversity inherent in socio-cultural setting of maternal health.

Within the framework of functionalism, agency-structure and GAD, clearly, maternal health can be explained from social and cultural framework of our society. The strategies must reflect the social catalysts of maternal health complications. Focusing solely on women without considering the structural circumstances negate any contextual perspective, ignore macro analysis. Issues of institutional policy, gender intolerance, and equitable and empathetic working conditions in any country must be recognized as the ultimate way to change systems that afflict women during reproductive age and eventually impact the their health.

According to the model, it should be possible to change attitudes towards some health-impairing behaviour by modifying the social environment. Much of the research into subjective meanings and health behaviour points strongly to the need for a more prominent ‘social environment’ focus to health promotion, rather than a narrow focus on individual behavioural change (Whybrow, 2010). For example, a pregnant woman’s decision concerning her health is more strongly affected by perceived social pressure than personal attitudes.

## **2.7 CONCEPTUAL FRAMEWORK**

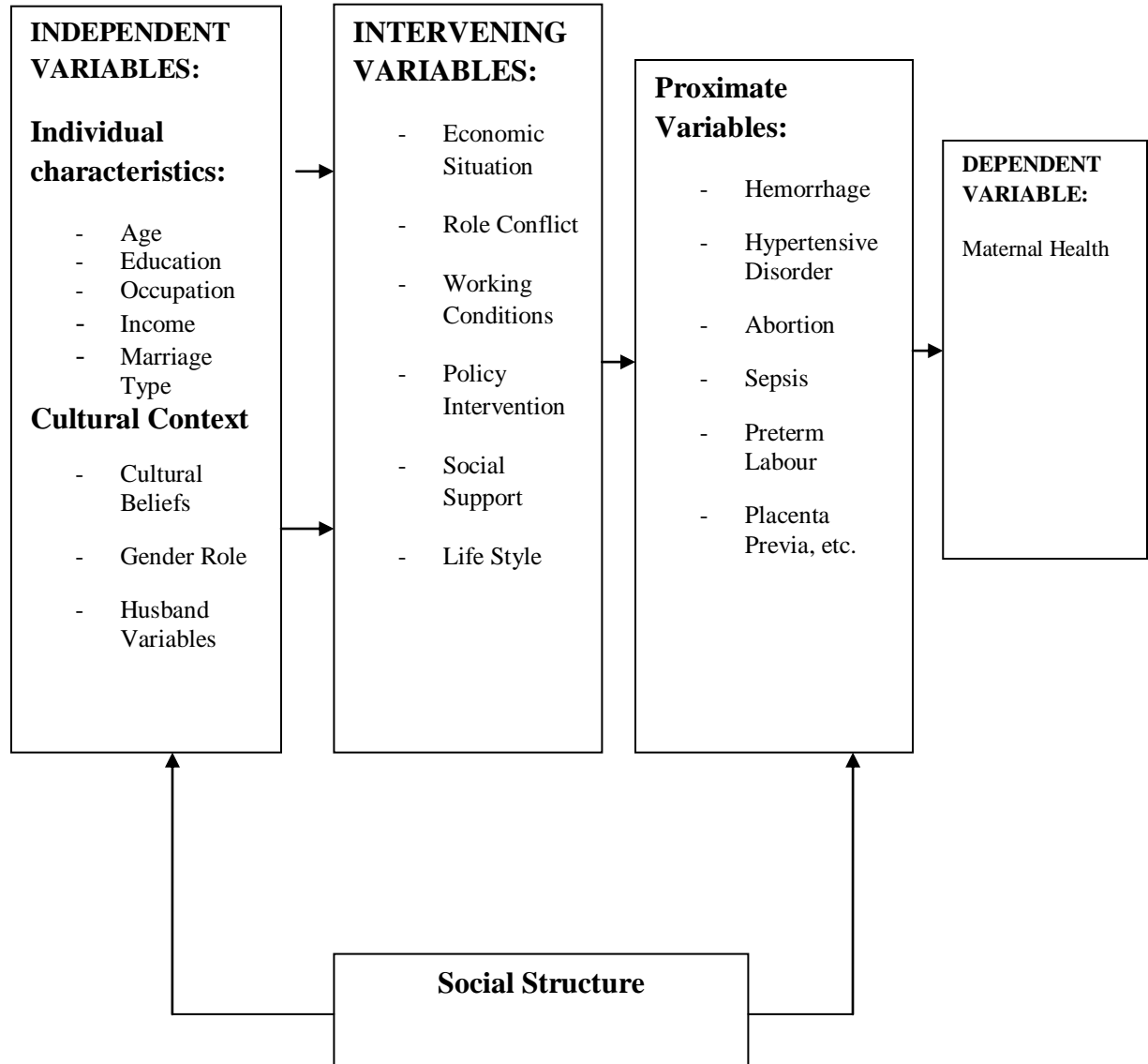
A conceptual framework of socio-cultural factors and medical proximate determinants of maternal health is presented here for a better understanding of their causal relationships. This is designed to outline the expected interrelationships between socio-cultural factors and maternal health.

This framework integrates the socio-cultural factors (SCF) and the medical proximate determinants (MPD) as interactive variables that help to explain maternal health in figure 2.1. These interrelationships are organized, making interventions on maternal health feasible. The interplay between the SCF and MPD resulting into maternal health

are illustrated using the arrow signs to point to the direction of interconnections among these variables.

The expected interconnections between these variables and maternal health are identified. While these are expectations or observations from the literature, they stand to be confirmed and corrected by the outcome of the research data analysis.

Figure 2.1: Schematic representation of the complex relationship between socio-cultural factors, medical factors (as proximate determinants) and maternal health.



The descriptions of the conceptual variables are presented as follows:

#### **Independent Variables:**

**Age** -The physiological ability of the body to carry pregnancy successfully is dependent on the age. It is also a fact that age is associated with decision-making and rationality. The study considered the current age of the respondents and age at marriage as vital

variables, among others, for the analysis to understand the socio-cultural context of maternal health.

**Education** – This study assumed that education increases the ability to think critically and analyze situations before acting. Education is a key determinant of maternal health. Not only does education invariably lead to higher income and greater awareness of important maternal health indicators it enhances value for healthy life style (Fadeyi, 2007). Studies have shown that educated women are more likely to take measures to protect themselves. Education accelerates behaviour change and makes women more receptive to prevention messages. Therefore, education was selected as one of the factors to be considered in understanding the socio-cultural context of maternal health.

**Cultural belief stereotype** – Culture is the totality of the way of life of a people and it includes among others, beliefs, knowledge, customs, and habits acquired by man as a member of society. Religious observances shape ideologies and life style. Religion is pervasive in Nigeria. The religious beliefs and cultural taboos can have a powerful impact on how pregnant women care for their health and the treatments they choose to accept. This can prevent early detection of problems and warning sign related to pregnancy complication, lack of awareness of pregnant women's needs and different views of pregnancy, with varying perceptions of why complications occur and treatment required. This might be more pervasive among the less educated woman. Therefore, the influences of cultural beliefs and stereotypes need to be incorporated in the analysis of maternal health.

**Economic Situation** – Economic situation is measured by occupation and income and are important indexes for measuring quality of life. Poor economic situation might lead to undernourishment. Women who are undernourished are prone to vitamin deficiency diseases during pregnancy, which lead to anemia. Anemia can be harmful to both the mother and the baby.

The economic influence also derives from economic pressure. Engagement in tedious activities because of economic demand for a pregnant woman, especially for the one that



has not been feeding well, can be dangerous. Economic demands affect attitude and value. As a consequence of poor maintenance, women are extremely susceptible to stress-related diseases, and have poor resistance to infections and other stressors. Economic status also determines the level of support they get during pregnancy. Therefore, the linkage between the economic status and maternal health should be considered appropriately.

**Role Conflict** – This study assumed reciprocal relationship between work and family that often results in conflict and tension. Women are often expected to occupy a number of roles at the same time: wife, mother, homemaker, employee, or care giver to parent etc. Meeting the demands of so many roles simultaneously leads to stressful situation in which choices must be prioritized. With the pressure of pregnancy, the body's physiology reacts. This was considered as a vital variable for analysis in the study of socio-cultural context of maternal health.

**Working Conditions** – It was also assumed that, most women workers work in precarious and vulnerable conditions because of economic pressures. Women are affected by unfavourable working policies that demand more time. Therefore, women face maternity related threats to their health and economic security, and this was considered as necessary for analysis in understanding the socio-cultural context of maternal health.

**Social Support** – The health impacts of stressful events not only depends on the nature of these events but also on the individuals' ability to cope. This study assumed that the support from others, such as relatives, friends, and neighbours can play an important role in fostering the physical and psychological health of women.

These variables are often mutually reinforcing and directly linked to socio-cultural and economic situations, creating pressure on pregnant women precipitates the medical proximate determinants of maternal health complications.

## **2.8 Study Hypotheses**

In line with the theoretical framework, five study hypotheses were drawn, which include:

- i. Social factors are likely to influence the proximate determinants of maternal health.
- ii. Cultural beliefs are likely to influence maternal health.
- iii. Role conflict is likely to influence maternal health.
- iv. Mothers' working conditions are likely to influence their health.
- v. There is a significant relationship between social support and maternal health.

## **CHAPTER THREE**

### **METHODS OF STUDY**

#### **3.0 Introduction**

This chapter presents the methods used in the study and the structural framework of the research. It deals with the generation of data, sampling procedure and techniques, data collection and the statistical techniques that were used to analyze the data collected.

#### **3.1 Research Design**

Research design is a plan, structure and strategy of investigation conceived so as to obtain answers to research questions. The survey method was employed as the research design for this study, based on the fact that it allows the collection of information from a representative sample of a target population. Both primary and secondary data were collected. The study utilized structured questionnaire, key informant interview, in-depth interview, and case studies for primary data collection.

The secondary source of data includes the review of books, journals, magazines, newspapers, reports from relevant articles on-line libraries etc. Both quantitative and qualitative research approaches were employed independently and complementarily in this study to harness the strength of both approaches in order to generate robust data for a holistic presentation of the subject matter of the study.

#### **3.2 The Study Area**

##### **Background to the Study Area**

The study was carried out in Lagos State which lies in the Southwestern part of Nigeria. Lagos State is a sprawling urban centre in which its unique endowments and strategic location have created an attraction for domestic and international immigration, producing a mega city of immense dynamism, complexity and opportunities. Rapid economic growth in Lagos State creates various opportunities for employment, education, cultural experiences and services. These opportunities attract people to

Lagos. In turn, the concentration of people in Lagos brings together a range of skills and new ideas, leading to improvements in the economic performance of Lagos. As a result, the population increases further. Population growth in a city like Lagos is therefore often regarded as a positive development. This perhaps is not a new phenomenon. What is new, however, is the growing failure of the city to fulfill much of the expectations both of those who live in it and those who have to depend on it for services (Afolabi, 1981).

Although Lagos State is the smallest state in Nigeria, with an area of 356,861 hectares of which 75,755 hectares are wetlands, it has the highest population, second only to Kano State according to the National Population Commission 2009, a claim that is highly contested by the Lagos State Population Commission and has given an estimated figure of 17 million. The difference in population outcome still stands as a bone of contention between the National Population Commission and the Lagos State government. Meanwhile, in 1963, the population of metropolitan Lagos was about 1.44 million; by the 1991 National Census, Lagos State had a population of 5.7 million. A UN study from 2000 estimated the projected the population of Lagos State to be around 15 million in 2003. With rapid population growth, public and private resources have been stretched as Lagos citizens struggle to get by (Compass, 2009). According to UN estimates of 17 million out of a national estimate of 150 million, Lagos State will be the third largest mega city in the world by year 2015 after Tokyo in Japan and Bombay in India. Of this population, Metropolitan Lagos, an area covering 37% of the land area of Lagos State is home to over 85% of the State population. The rate of population growth is about 600,000 per annum with a population density of about 4,193 persons per sq. km. In the built-up areas of Metropolitan Lagos, the average density is over 20,000 persons per square km (Lagos population, 2010). However, while the state major ethnic group is the Yoruba speaking people, the state has remained the economic nerve centre of Nigeria since time immemorial (Adeyemi *et al*, 2009; Amoo, *et al*, 2010). The state therefore, serves as a socio-cultural melting pot attracting both Nigerian's and foreigners alike.

The issue of liveability has become very pressing, especially with the increasing environmental deterioration. According to Morka (2007) this involves not only living

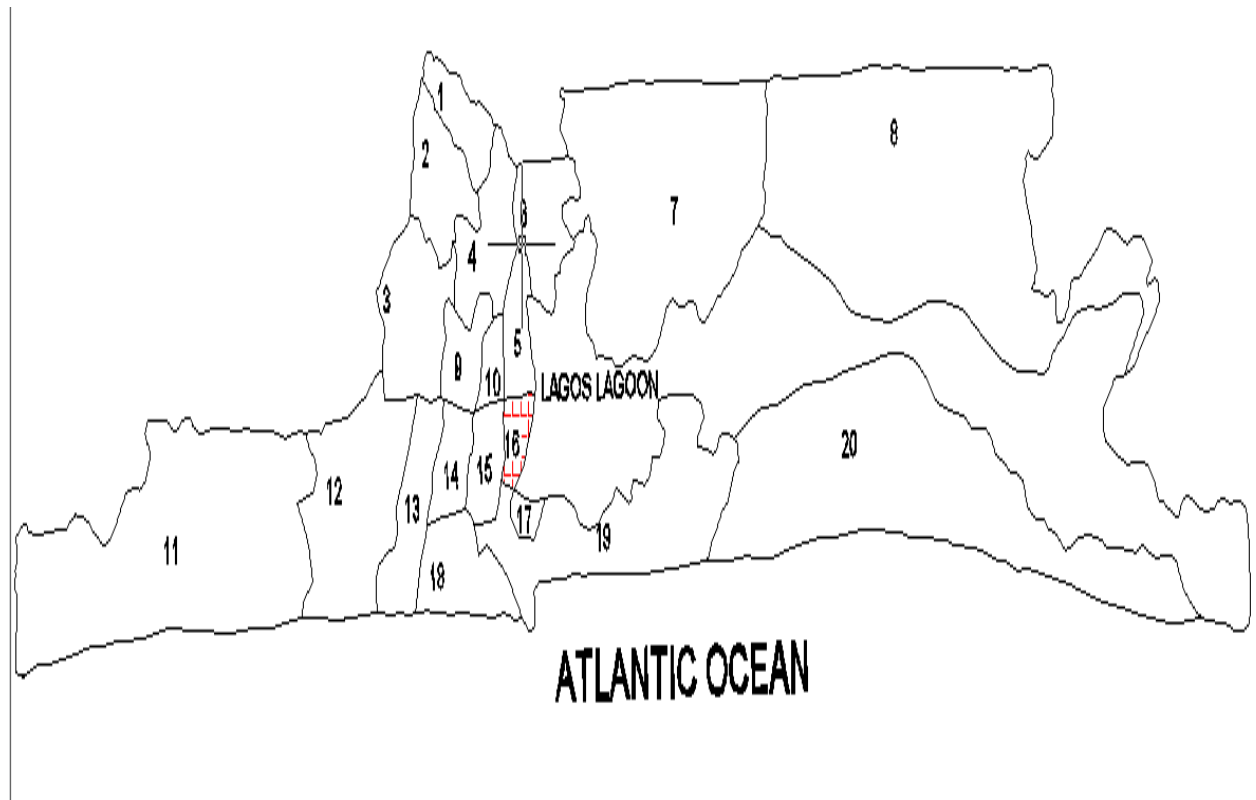
conditions but also ease of circulations in the city. There is tremendous pressure of population on limited facilities and this is manifested in the growth of squatter settlement, overcrowded habitation, inadequate water and power supply, bad roads and generally poor environmental sanitation. By world standards, Lagos, the largest of Nigeria's metropolitan centres, is relatively small. But its traffic problems are greater than those of cities many times its size. The traffic situation is already making Lagos almost an unliveable city, apart from gradually raising its level of air pollution (Mabogunje, 1995). In a statement credited to Emdin-Umeh (2011), twenty five thousand (25,000) people from across the world are still moving into Lagos for various reasons on a daily basis, with little or no commensurate infrastructure to match the influx thereby posing more challenges to the health of the population.

The problems of achieving health for all in Lagos City are common features of all urbanizing societies in Nigeria. Urban center do not necessarily improve living standards. Even the structure sometimes result in a relative decline in health levels in urban areas, and these health levels are closely related to the quality of urban living environments (Brigida, 2002). Urban growth has affected different groups of people in the city in different ways. Although urban life is most fascinating it is also demanding especially on pregnant women who do not only contend with their own health but also with the life they are foisted to carry for nine months. Such experience is especially daunting for pregnant women in Lagos State, Nigeria, who are faced with poor provision of social amenities and infrastructural decay.

Health care facilities and services are concentrated in Lagos, but a big hospital does not improve any one's health, as maternal mortality rate in Lagos State was put at 650 per 100,000 live births and expressed the government's worry at the high rate. Rather, health care is about identifying the health problems of a population and designing an integrated health policy to improve the challenge (National Mirror, 2012; Radio Lagos 2009).

Lagos State is made up of twenty (20) Local government Areas. These are presented in fig.1 below.

**Figure 1 Map of Lagos State**



*1-Agege 2-Ifako- Ijaye 3-Alimosho 4-Ikeja 5-.Shomolu 6-Koshofe 7-Ikorodu 8-Epe 9-Oshodi- Isolo 10-Mushin11-Badagry 12- Ojo 13-Amuwo Odofin 14-Ajeromi Ifelodun 15- Surulere 16-Lagos Mainland 17-Lagos Island18-Apapa 19-Eti Osa 20-Ibeju-Lekki*  
Source: Aluko, 2010

### **3.3 The Study Population**

The study population comprises women aged 15-49 years in Lagos State because this age bracket represents reproductive years of women as defined by WHO (2006). Eligible participants include all women that have given birth in the last one year and/or were pregnant and resident in Lagos State. Every eligible woman in Lagos State had equal chance of being selected for the study. When the study was conducted, it was estimated that women constituted about half of the Lagos State population while those

who were within the research age category constituted about 76.6% (National Population Commission, 2009). The respondents were either married, single, divorced, separated or widowed. The general denominator of the population is that they were of reproductive age and have a child below one year and/or pregnant.

### 3.4 Sample Size

The data for this study came from a sample size of a thousand and six hundred (1600) women of reproductive age range of 15- 49. As published by the National Population Commission (2009), there are 2,562,962 women aged 15-49 years in Lagos State. This figure shows an average of 128,148 women aged 15-49 years in each of the 20 LGA of Lagos State. A sample size of 400 women ages 15-49 years were selected from each LGA, using a standard formula for sample size as follows:  $n = z^2 pq / d^2$ , which is used in calculating the minimum sample size when the universe contains 10,000 objects or more (Babalola, 1998).

Where n - minimum sample size,

z - The normal deviate corresponding to the desired confidence level = 1.96,

p - The proportion of people in the study population thought to have the key characteristic being measured = 0.7,

q - The opposite of p,  $q = 1 - p = 0.3$ ,

d - Degree of accuracy desired = 0.05

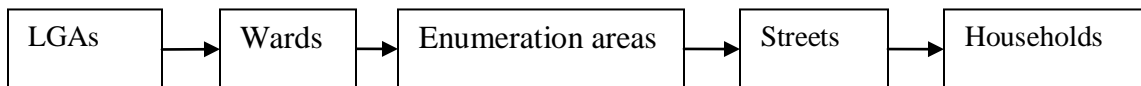
$$n = \frac{1.96^2 \times 0.7 \times 0.3}{0.05^2} = \frac{3.8416 \times 0.21}{0.0025} = \frac{0.806736}{0.0025} = 322.69 \quad n = 323$$

On the other hand, the calculated sample size of 323 was increased to 400 for replacement of likely non-response or missing responses, as well as to increase the adequacy of the sample. A sample size of equal number of 400 making 1,600 women ages 15-49 years were planned for each of the selected LGA, using a standard formula for sample size. However, some copies of the questionnaire were missing and some

were not completed therefore, they could not be processed. As such, the data for this study came from a sample size of 1362. This is also complimented with 20 key informant interviews and four case studies.

### 3.5 Sampling Technique

The study adopted a multi-stage sampling technique, to select a representative sample from the study population. The sampled population was drawn from households and the maternity section of existing general hospitals in each LGA. The stages are graphically represented in figure below;



The first stage of the sampling process involved stratification of LGAs into maternal mortality rates. LGAs in Lagos State were divided into two, those who had MMR of less than 650 per 100,000 births and those who were above 650 per 100,000 live births. Ten LGAs were made up of each of the strata. Ratio 3:1 was adopted in selecting from high MMR and low MMR respectively being the pattern that is common in the literature. However, respondents for the key informant interviews and for case studies were purposively selected from each of the LGAs. The asterisked LGA on the table 3.3 below were the LGAs randomly selected for the study.



**Table 3.1. Results of 2010 Maternal Mortality Study in all the 20 Local Government Areas (LGAs) of Lagos State, NIGERIA**

<b>S/N</b>	<b>Local Government Areas (LGAs)</b>	<b>Maternal Mortality Ratio (MMR)</b>
1.	Agege	667 per 100,000 live births
2.	Ajeromi/Ifelodun	736 per 100,000 live births
3.	*Alimosho	826 per 100,000 live births*
4.	Amuwo-Odofin	555 per 100,000 live births
5.	Apapa	421 per 100,000 live births
6.	Badagry	600 per 100,000 live births
7.	Epe	803 per 100,000 live births
8.	Eti-Osa	725 per 100,000 live births
9.	Ifako-Ijaye	690 per 100,000 live births
10.	*Ibeju-Lekki	758 per 100,000 live births*
11.	Ikeja	354 per 100,000 live births
12.	*Ikorodu	754 per 100,000 live births*
13.	Kosofe	421 per 100,000 live births
14.	*Lagos Island	310 per 100,000 live births*
15.	Lagos Mainland	443 per 100,000 live births
16.	Mushin	511 per 100,000 live births
17.	Ojo	667 per 100,000 live births
18.	Oshodi-Isolo	443 per 100,000 live births
19.	Shomolu	667 per 100,000 live births
20.	Surulere	332 per 100,000 live births

Source: Lagos State Ministry of Health, 2012

\*Sampled LGAs

The second stage was random selection of four enumeration areas from each of the selected LGAs while 2 streets from a listing of all major streets in each of the

enumeration area were also made. Systematic random sampling procedure was then used to select housing units from a listing of all houses in each major street in the sample. Finally, within each selected housing unit, a household comprising one woman of reproductive age that was currently pregnant, or who have given birth in the last one year was interviewed: Where there was a household that did not fulfill the criteria, the next household was chosen for replacement. Also, any household where there was more than one eligible woman for selection, a simple random sampling was used to select a respondent. Table 3.4 below shows the selected LGAs, EAs and the streets. Hence, this method ensured that selected respondents were evenly distributed in the EAs and LGAs.

**Table 3.2: Distribution of Selected EAs in each of the LGAs and Streets in each of the EAs**

LGAs	EAs	Streets
Alimosho	Omituntun-olori	Oluwalogbon, Bada Street
	Akowanjo	Samuel street, Fakoya street
	Egbeda	Tayo Kehinde, Solomon Okonkwo
	Alaguntan	Yusuf, Jolaosho
Ibeju-Lekki	Ibeju I	Okegun, Odofin, Iba oloja, and Oko Aro
	Orimedu II	Orimedu, Orofin, and Akodo
	Iwerekun II	Sapati, Oribanwa and Idi ori
	Orimedu III	Igando Orodu, Eleko and Idado
Ikorodu	Aige/Solomade	Olubi and Ogunsanya
	Aga/Ijomu	Motolani and Odugate
	Majidun	Aiyegbejeje and Dagbolu
	Odugunyan	Losi Oba and Tenibegiloju
Lagos Island	Oke-Olowogbowo	Olowogbowo, and Bereku/Idita
	Oke Arin /Idumota	Enu-Owa and Ebute Ero
	Idunganran/Idumagbo	Isale Eko and Oju-Olokun
	Odan	Lewis/Hawley and Igbosere

Guide: *Lagos State Independent Electoral Commission Guide to Polling Units/Collation Center, 2008 .*

## **ALIMOSHO LGA**

### **I. History**

Alimosho Local Government was first carved out of the old Ikeja Local Government in April 1980 during the second republic. It had barely settled down to the business of governance when the next military regime scrapped it. Then came August 1991 when the then Babangida Administration again created it and backed it up with Decree 47 of 1991.

A semi-urban local government, Alimosho is bounded in the West by Ojo Local Government, in the East by Ikeja Local Government while it shares boundaries with Oshodi-Isolo Northwards and Ado-Odo-Otta Local Government in Ogun State southwards. History has it that the Awori were the earliest settlers in Alimosho while their next neighbours – the Yewas (formerly Egbados) came on their heels.

Alimosho LGA, according to the national Population Commission, is the most populous LGA in Lagos State (Uroko, 2011). The 2006 provisional census figures put its population at about 1,099,656. As at 2011, the estimated figure of the population, doubled with the migration of people from other urban centres.

### **II. Settlements**

Its major communities include Egbe, Agodo, Ikotun, Isheri-Oshun, Ijegan, Abaranje, Okerube, Idimu, Isheri-Olofin, Abule-Odu, Egbeda, Akowonjo, Shasha, and Gowon Estate. Others include Mosa, Baruwa, Abesan, Ipaja, Ayobo, Ishefun, Camp Davies, Bada-Balogun, Aboru, Ifesowapo, Oke-Odo, Agbelekale, Araromi-Ishaga, Meiran, Abule-Egba, Alagbado among others.

### **III. Administration**

To make the art of governance easier, effective and grassroot-oriented the local government encourages themselves into Community Development Associations (CDA) and it had about 100 of these at the time of this compilation. The purpose is to organize,

mobilize and execute projects to aid development in their respective areas. This has always been done creditably well.

These feats were achieved through constant support and assistance of the local government acting through the department of Agriculture, Rural and Social Development.

In support of the local government's efforts to bring health care services nearer to the people, the ELF oil Company built a Maternity Centre for post-natal health delivery services for mothers. The oil company committed about 7 million Naira to the project described as one of its kind of in African continent (Durosinmi-Etti, *et al.* 1998).

#### **IV. Economy**

The LGA is facing development challenges and decaying infrastructural facilities arising from federal and state government acquisitions coupled with power lines, oil pipelines and natural gorges criss-crossing the cityscape. Most of the residents engage in informal sector with few industries (Uroko, 2011). The inhabitants are predominantly farmers and traders. They engage in mat-making, cassava production and garri processing, fufu making, tie and dye and, of course, horticulture. Its major markets include the Irepodun market at Ikotun, Iyana Ipaja, Oke-Odo Foodstuffs Market, Alagbado (Durosinmi-Etti, *et al.* 1998), hence making the entire area a dormitory settlement (Uroko, 2011).

### **IBEJU-LEKKI LGA**

#### **I. History**

Ibeju-Lekki first appeared as a Local Government in 1979 when it was excised from the then Epe Local Government by the civilian administration of Lateef Jakande. Following the militarization of Nigerian Political landscape in 1983, the nascent Local Government reverted to its source that is Epe Local Government. In May 1989, Ibeju-Lekki Local Government experienced a rival when the Babangida administration created a total of 589 Local Governments throughout the federation.

A Conglomeration of two Major districts of Ibeju and Lekki, with administrative headquarters at Akodo along Kaiyeto-ro-Eleko coastal road, Ibeju Lekki Local Government Area is bounded to the South by the Atlantic Ocean, on the North by the Lekki Lagoon while it is co-terminus with Epe Local Government and Eti-Osa Local Government Areas in the East and West respectively (Durosinmi-Etti, *et al.* 1998).

## **II. Settlements**

Ibeju Lekki LGA is also a low class area. It is predominantly a rural area, comprising several communities (Aigbe, 2011). Representing a sizeable proportion of the total land mass of Lagos State, Ibeju-Lekki Local Government Area embraces many rural settlements and localities including Abijo, Ajegbenwa, Aiyeteju, Awoyaya, Okun-mopo, Bogije, Idotun, Arapagi, Debojo, Eleko, Okun-Folu, Iberikodo, Ibeju, Osoroko, Iwerekun and Idado. Others are Kaiyeto-ro, Lekki, Magbon-Alade, Okunraye, Orimedu, Sirinwon and Sapati, among others (Durosinmi-Etti, *et al.* 1998).

## **III. Administration**

Between 1979 and 1983 the Local Government was administered by a management team. The succeeding administration, which assumed office in August 1989, was headed by a civil servant, who served as Sole Administrator and later in 1990, became Chairman set up to run the affairs of the Local Government.

In line with the State Administration's directive, and as a deliberate attempt to further open up the Local Government to greater development and thus enhance its tourism and investment potentials, the Administration pursued road rehabilitation programmes.

## **IV. Economy**

Because of the predominantly aquatic topography of the Local Government Area, the inhabitants, as is to be expected, are mainly fishers and farmers. Ibeju-Lekki is a veritable food basket as the terrain is ideally suited for the practice of horticulture and cultivation of rice, banana, coconut, cassava, grains and fruit crops like mango and

cashew nuts. The area is blessed with different species of timber and oil palm products (Durosinmi-Etti, *et al.* 1998).

The LGA is largely riverine. Its housing condition is poor and other infrastructural facilities are almost non-existent. Residents exploit natural resources for life subsistence through fishing, wine making, farming and wood splitting (Aigbe, 2011), while the women, for the most part, are engaged in petty trading activities.

## **IKORODU LGA**

### **I. History**

A settlement of the Ijebu-Remo people in Ogun State believed to have been founded by Oga Lasunwon, Ikorodu derivative of “**Oko-Odu**” (connoting a vegetable farmland topography) Local Government, with an area of about 61,854 square kilometers, is one of the largest in the State (Durosinmi-Etti, *et al.* 1998).

The history of the local government dates back to the colonial era when it existed as a native of council in the old western Region. Following Nigeria’s independence in 1960, it became a divisional council and much later in 1977 metamorphosed into a district council. Consequent upon the Local Government reforms of 1976, the then Ikorodu Divisional Council was remodeled into a full-fledged Local Government. Situated about 36 kilometres North-East of Lagos and 26 kilometres from Ikeja, the Lagos State Capital, Ikorodu Local Government Area shares boundaries with Ogun State in the North, Eti-Osa Local Government Area and the Lagos Lagoon in the South, Kosofe Local Government Area in the West and Epe Local Government Area in the East. The area is a lowland region with flat undulating feature, stretching from east to west along the Lagos lagoon front. With the opening of Lagos-Ikorodu high way in 1953, Ikorodu became an important gateway in 1953 (Inem, Kanu and Atere, 2008).

### **II. Settlements**

An important gateway to the interior of Nigeria since 1953 when the Lagos–Ikorodu highway was opened, Ikorodu Local Government Area harbours a host of towns and

settlements. Prominent among these are Ikorodu (headquarters of the area), Imota, Igbogbo, Ijede, Ipakodo, Baiyeku, Agura, Isiu, Gberigbe, Ofin and Oreta. Others are Igbokuta, Ibeshe, Odogunyan, Agbala. Erikorodo, Losi Oba, Majidun, Imagbon and Itolo (Durosinmi-Etti, *et al.* 1998).

### **III. Administration**

Since 1972, Ikorodu Local Government has so far had a total of 12 Chairmen and Administrators eight of whom were appointed while the remaining four were democratically elected.

### **IV. Economy**

Ikorodu Local Government Area is blessed with immense agricultural land and produce used as raw materials by agro-based industries and entrepreneurs in the area.

Besides agriculture, the Local Government's economy hinges to a large extent on commerce and industry in which a significant number of the people are engaged. The area has the largest industrial estate in Nigeria and possibly in the whole of Africa, covering about 1,582.27 hectares of land. Concentrated on the vast estates are industries engaged in the production of textiles, consumables, fisheries, an elated water, publishing, wood construction and ceramics/burnt bricks.

Distributive trade, is largely carried out in the principal markets of Ayangburen (Itoikin Road), Ita-Elewa, Owutu, Ibeshe, Obada (Imota) Kaniyi (Igbogbo) and Owode (Ewu-Elepe).

The economic life of the area is given an added impetus by the presence of many financial institutions and residential estates (Durosinmi-Etti, *et al.* 1998).

## **LAGOS ISLAND LGA**

### **I. History**

The genesis of the Lagos Island Local Government – the oldest in Nigeria could be traced to 1901 when a native council was constituted for Lagos to counsel the colonial

administration in Nigeria on governance and welfare of the aborigine. The native council in 1914 gave way to a town council upon the amalgamation of the northern and southern protectorates. Lagos, having attained the status of a city in 1961, the town council became a city council (Durosini-Etti, *et al.* 1998).

### **I. Settlements**

Lagos Island is a “two-face” LGA (Aigbe, 2011). It is the State’s corporate headquarters and houses the city’s high-rise buildings. Conversely, it is also home to blighted and poor neighbourhoods, such as Iddo and Isale Eko. Isale Eko is characterized by primitive communism, typified by communal life of the extended family system. It has family compounds and the houses depict architectural pattern that resemble the traditional Yoruba pattern. Resistance to migrant encroachment denied the area of modernization input. Most of the residents are not educated and engage in low-income occupations, like petty trading and menial jobs.

### **II. Administration**

Right from its early days when it used to be Lagos Town Council and later Lagos City Council, Lagos Island Local Government has been administered by no fewer than 26 men and women who served in various capacities ranging from Lord Mayor, Chairman to Sole Administrator.

### **III. Economy**

Lagos Island is traditionally the trading post and the commercial highway to the Nigerian hinterland. Thus the economy of Lagos Island Local Government Area is quite naturally founded on commerce. As the pivot of the nation’s commerce and industries, Lagos Island Local Government Area swarms with commercial channels, local markets, shopping centres, departmental stores, shops, kiosks and stalls.

The big booming markets are located at Ebute-elefun, ebute ero, idunmota, ita-Balogun, Ereko-Martins, Ita-faji, Jankara, Oke-Arin and Sangrouse. Traders from across the country and from West Africa sub-region patronize the markets daily. Even greater



commercial activities are carried out at the bigger Sura Shopping Complex, Okesuna, Tafawa Balewa Shopping Complex, Race Course, Falomo Shopping Complex, Ikoyi and the UTC and Leventis Departmental Stores on the Marina.

Within its Central Business District stretching across Marina, Nnamdi Azikwe, Broad Street, as well as Ofin, Ita-Balogun and Ereko are high concentration of headquarter offices of multinational conglomerates and leading financial institutions like Eko International Bank, NICON Insurance Plc, Union Bank, Shell Petroleum, Nigeria Reinsurance Corporation and the UACN Group (Durosinmi-Etti, *et al.* 1998).

### **HEALTH FACILITIES IN THE STUDY AREA**

**Table 3.3. Distribution of health facilities in the study LGAs**

<b>LGA</b>	<b>Population size</b>	<b>Teaching Hospital</b>	<b>General Hospital</b>	<b>Public PHC</b>	<b>Private Hospital/Maternity Centers</b>	<b>Total</b>
<b>Alimosho</b>	2,396,193	-	1	29	175	205
<b>Ibeju-Lekki</b>	116,519	-	1	24	5	30
<b>Ikorodu</b>	806,577	-	3	20	71	94
<b>Lagos Island</b>	1,006,516	-	4	9	68	81
<b>Total</b>	4,325,805	-	9	82	319	410
<b>% of row total</b>			2.2	20	77.8	100

**Source:** Lagos State Health Facility Monitoring and Accreditation Agency (HEFAAMA), 2012.

From the Table 3.1 above there are 319 (77.8%) private hospital/maternity centers compared to 91 (22.2%) government owned in the study LGAs. The variation in the level of facility provision was examined using population size of the respective LGAs

and the comparative analysis of the population served by these facilities in the LGAs is presented as shown in Table 3.2 below.

**Table: 3.4: Ratio of Health Facility to Total Population**

LGAs	Ratio of Health Facility to Total Population		
	Public PHC	Private Hospital/Maternity	All Facilities
Alimasho	1.79,873	1.13,693	1.11,689
Ibeju-Lekki	1.4,661	1.23,304	1.3,884
Ikorodu	1.35,069	1.11,360	1.8,581
Lagos Island	1.77,424	1.14,802	1.12426

### **3.6 Methods of Data Collection**

This segment deals with a detailed account of the instruments and methods that were adopted in the study to obtain the information required. The main purpose of the study was to establish the socio-cultural context of maternal health. Therefore, data collected for this study were both primary and secondary, and were quantitative and qualitative in nature. These are discussed respectively. The secondary source of data for this study, include the review of books, journals, magazines, reports from libraries, internet, dailies, etc. These sources provided necessary information pertaining to the background and the extent of related studies. Owing to the nature of the problem, the primary data were obtained through survey, key informant interviews, and case studies.

#### **3.6.1 Research Instruments**

In this research, the following principal methods were used to obtain primary information on maternal health and socio-cultural risk factors that are associated with it. These methods include: the survey method, key informant interviews and case studies.

## **I. Structured questionnaire**

Survey formed an important aspect of collecting quantitative data with the use of questionnaire. The questionnaire served as the primary instrument adopted for this study. The questions were partly adapted and structured to reflect the health issues relevant to the objectives of the study. The broad research objectives were reflected in the specific questions asked in the questionnaire. This helped to elicit information from the entire respondents selected on specific topics. The answers so derived from the questionnaire therefore formed the basis on which analyses were made.

The questionnaire was designed in a way that both social, cultural and economic factors and maternal responses towards their health were captured. The instrument was divided into nine sections, A-I, which helped to measure the variables of study. Section A covered the socio-demographic characteristics of the respondents. Section B contained Partner/husband socio-demographic background, while section C was on the reproductive history of the respondents. The information helped to capture the respondents' reproductive health behaviour. Section D contained information on the working conditions and section E was on role conflict. Section F, G, H, and I dealt with social support, cultural beliefs and stereotypes, food and money during pregnancy and life style respectively (see Appendix 1). The responses generated from these sections helped to establish the foundation upon which the study could be situated in its socio-cultural context.

The respondents comprised both educated and non-literate women, who were married or unmarried but had given birth in the last one year and/or were pregnant. Due to the fact that some of the respondents lacked the ability to read and write, the questions were read out and interpreted to them with the help of trained research assistants. Most of the questions were closed ended; with few open ended questions for the respondents to express their views on certain key issues.

**Validity:** The questionnaire was pilot tested by administering it to 50 respondents in October 2011, in Ota, Ogun State. This helped to determine the necessary changes in

terms of re-phrasing and the logical sequence of the questions in the questionnaire. The essence was to ensure that the items were not ambiguous and adequate for the study.

**Reliability:** The reliability of the questionnaire was ascertained by employing the test-retest reliability method. The test-retest reliability was carried out by administering the questionnaire to a group of 20 women in Ota. After an interval of 2 weeks, it was re-administered to the same set of people (only 17 were available). The two sets of scores were correlated. The questionnaire was therefore considered adequate for the study.

## **II. In-depth Interviewing**

In-depth interviews were used to compliment the questionnaire in eliciting information that mostly border on the research subject matter. The primary objective of the interviews was to explore people's thoughts, feelings, and behaviour on key issues regarding reproductive health. Sixteen (16) In-depth interviews were conducted in the LGAs (four women from each selected Local Government Area). Respondents for the in-depth interviews were purposively selected. The interviews were conducted at different times and locations. Some interviews were conducted in the maternity centers/hospitals in all the selected LGAs, while some were conducted immediately after the questionnaire had been administered.

The in-depth interview question guide (Appendix II) was designed in a way that the informants were encouraged to discuss in details on specific themes that were indentified for in-depth understanding. There was an interview guide; the researcher served as the facilitator, while a tape recorder was used to record the interview, which was later transcribed for the purpose of analysis.

The interview guide used in this study was divided into four parts. Section one was on pregnancy experience. The discussion focused on what life was like as a pregnant woman, the number of births, antenatal attendance, place of delivery and challenges during pregnancy. While other parts focused on in-depth study of socio-cultural

environment conditions of the mothers. Questions were asked on the respondents working experience, gender roles and social support.

### **III. Key Informant Interview**

The other interview guide was used for medical personnels (four Key Informant representing one medical personnel from each of the selected LGAs); it was structured to elicit information on their experiences of pregnancy complications. Questions were asked on pregnancy related complications commonly reported at the center/or hospital, the causes of those complications, why women are susceptible and the characteristic of those who are majorly suffering from those complications. It probed on why maternal mortality continues to be at alarming rate in the state and the place of biomedical in its reduction and also to connect the relationship between medical and social factors in maternal health complications.

The process involved in conducting the key informant interview can best be described as the process of inquiry involving a gradual clarification of the research problems. Rather than being too committed to the interview guide, the issues that were raised brought about sprout matters which were followed up in consecutive questions. This is referred to as a process of “progressive focusing” (Hammersley, 2006; Asakitikpi, 2004).

### **IV. Case Study**

A reconstruction of respondents’ traumatic experience formed an apt source of data that shed light on the detailed experience of respondents regarding the subject under investigation. Respondents for the case studies were purposively selected from each of the LGAs’ maternity centres during the field work. These studies represent only those that were identified during the period of the field work. The case studies placed emphasis on understanding the day-to-day activities and experience of a pregnant woman in Lagos State. Aside from observing pregnant women’s response to daily demands, questions were asked at intervals and recorded with permission. The case studies also allowed the researcher to obtain more detailed and richer information on

antenatal process. Four cases were observed during the course of the fieldwork, one case from each of the LGAs, and represented only those that were identified during the period of the fieldwork. The case subjects were mostly women of middle/low academic statuses and some were self employed.

### **3.6.2. Procedure for Data Collection**

To ensure speedy collection of accurate and reliable data, some steps were taken. These include the selection and training of field assistants, administration of questionnaire, conducting of the key informant interviews and identification of potential cases for case studies.

Four research assistants were recruited for the purpose of administering the research questionnaire as well as to assist with the conduct of in-depth interviews. Although, the assistants were graduates, there was still the need to give them instructions regarding interview techniques and field procedures and a detailed review of the items on the questionnaire for clarity. They were very conversant with Lagos State and could speak English, Yoruba and Pidgin English. This enabled them to communicate effectively.

The first step in the administration of the questionnaire was the introduction and informing the potential respondents of the research objectives, and soliciting for their cooperation. This procedure took a lot of persuasion for most of the respondents to agree to either filling the questionnaire or answer the questions when asked.

Administration of questionnaires took place over a two months period from (November 2011 to January 2012). The researcher and the research assistants administered questionnaire in a LGA per time to avoid boredom, with each interviewer interviewing 8 to 10 respondents per day. Two hundred respondents were interviewed on the average per week. Where appropriate the participating respondents were given the questionnaire to fill. Otherwise, the interviewer asked questions and filled on behalf of the respondent. The questions took an average of 25 to 40 minutes to answer. In some areas, visits to

homes were made on weekends because of non-availability of the eligible respondents during the working days.

The first level of qualitative data collection was to secure the permission from the Chairman, Lagos State Health Service Commission, to interview medical personnel in each of the various maternity centres/General Hospital within the locations. This initial authorization helped to facilitate easy movement and contacts.

Several visits were made to the maternity centres to interview the gynecologists as they were always busy attending to patients. It was during the period of waiting to catch the attention of the medical personnel that some of the interviews were conducted for the pregnant women or the new mothers. Each of them was interviewed separately in the waiting room. Also, appropriate permission was sought before the interviews.

The cases for case studies were selected during the field work and one selected with the help of medical personnel in the selected LGA's hospital/maternity centres. The medical personnel helped in persuading the potential case to cooperate with the researcher. The subjects were visited twice and each visit lasted up to 30 minutes to one hours.

The discussions during the case studies were mostly done in either Pidgin English or Yoruba language and were tape recorded after securing their consent, to reduce the problem of misinterpretation of answers, in other to have a reliable result. Because the studies were conducted in homes, the familiar settings encouraged the subjects to open up. Thus a broad understanding of the socio-cultural factors was gained, not just from what the subject said, but also, from what the researcher was able to gain from observing events and activities as they took place. This, however, has its disadvantage. Despite educating the subjects on the aim and objectives of the study, the persuasion from the medical personnel and the provision of some food items to encourage their responses, there were still situations whereby subjects deliberately distorted or tried to falsify information.

### **3.7 Problems Encountered during Fieldwork**

The major constraint to this study was the issue of illiteracy and the sensitive nature of questions, which made it very complicated for people who could not read or write to appreciate the need to supply relevant information. Even for those with some level of education, their attitude showed that they placed little value on research.

Again, it was sometimes difficult to obtain sufficient responses from the respondents. Some information was considered so secret and personal, even those that were supposed to be for public consumption. This was an impediment to the speed required for the completion of the fieldwork and also made effective communication a bit more difficult.

Another fundamental problem also encountered was logistic. The transportation system in the state was not encouraging. Ibeju Lekki happened to be the farthest location. Going to and fro that location was the most challenging. The researcher had no alternative than to sleep over for four days to get the questionnaire completed. Compounding the challenge was the fact that the researcher had to make several visits to the hospitals before interview was granted. There were also enormous financial commitments involved. The cost of printing the questionnaire, transportation of the research assistants, feeding and sometimes, the money given or used to buy things to appease the respondents to get information, was enormous.

Despite all, the field work was worthwhile and gave the researcher more experience and exposure.

### **3.8 Data Handling and Analysis**

The quantitative and qualitative data gathered from the field were analyzed using different methods. Descriptive and inferential statistical methods were used to analyze the quantitative data. Copies of the questionnaire returned were edited, coded and data entry was done. The data were analyzed using the Statistical Package for Social Sciences (SPSS 16) software. First, characteristics of the study sample were described using



univariate analysis (frequency distribution and simple percentages). Bivariate analysis (cross tabulations) was utilized as well. Descriptive statistics such as mean, mode and standard deviation were also utilized.

In addition, Multi-variate logistic regression analyses were performed in order to estimate the relative influence of the independent variables on maternal health. Although, there are several indices that can be use to capture maternal health. However, in this study maternal health is considered as the existence or absence of complication as Yes (1) or No (0). This is measured against some selected independent variables such as; age, education, income, marital status, etc. This entailed an examination of the patterns of association between the dependent and some selected independent variables.

### **Model specification**

In the context of logistic regression model,  $\pi$  in the conditional probability of the form  $\rho\{Y=1\}$ . That is, the occurrence of any maternal health complication's indicator is more or less likely dependent on combinations of values of the predictor variables.

Therefore, the general model I measures the influence of socio-demographic factors on the odds of maternal health.

$$\ln = \{p/(1-p)\} = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + e$$

Where,  $e$  = The residual Value/Error Term

$\beta_i$  = The coefficient of  $X_i$   $V_i=1,2,\dots,n$

$\rho$  = Probability of health complication

$(1-\rho)$  = The probability of no health complication

$$\ln = \{p/(1-\rho)\} = \text{log-odds of maternal health to log-odds of maternal health complications}$$

Hence, parameters in model I are denoted as follows:

$\alpha_0$  = intercept

$\beta_1$  = change in log-odds of maternal health complication with mother's age

$\beta_2$  = change in log-odds of maternal health complication with mother's educational attainment

$\beta_3$  = change in log-odds of maternal health complication with mother's occupational status

$\beta_4$  = change in log-odds of maternal health complication with mother's income

$\beta_5$  = change in log-odds of maternal health complication with mother's religion

$\beta_6$  = change in log-odds of maternal health complication with mother's marital status

$\beta_7$  = change in log-odds of maternal health complication with type of marriage

**Model II** Logistic Regression estimating the influence of cultural beliefs and stereotypes on the odds of experiencing maternal health complication

$$\ln = \{p/(1-p)\} = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + e$$

Where,  $e$  = The residual Value/Error Term

$\beta_i$  = The coefficient of  $X_i$   $V_i=1,2,\dots,n$

$p$  = Probability of health complication

$(1-p)$  = The probability of no health complication

$\ln = \{p/(1-p)\}$  = log-odds of maternal health to log-odds of maternal health complications

Hence, parameters in model II are denoted as follows:

$\alpha_0$  = intercept

$\beta_1$  = change in log-odds of maternal health complication with perception of symptoms

$\beta_2$ = change in log-odds of maternal health complication with seeking medical attention

$\beta_3$ = change in log-odds of maternal health complication with place of antenatal attendance

$\beta_4$ = change in log-odds of maternal health complication with cultural practices

**Model III** Logistic Regression estimating the influence of role conflicts on the odds of experiencing maternal health complication

$$\ln = \{p/(1-p)\} = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + e$$

Where,  $e$  = The residual Value/Error Term

$\beta_i$  = The coefficient of  $X_i$   $V_i=1,2,\dots,n$

$p$  = Probability of health complication

$(1-p)$  = The probability of no health complication

$$\ln = \{p/(1-p)\} = \text{log-odds of maternal health to log-odds of maternal health complications}$$

Hence, parameters in model III are denoted as follows:

$\alpha_0$  = intercept

$\beta_1$ = change in log-odds of maternal health complication with conflict with house chores

$\beta_2$ = change in log-odds of maternal health complication with conflict with going to market

$\beta_3$ = change in log-odds of maternal health complication with conflict with washing

$\beta_4$ = change in log-odds of maternal health complication with rest

**Model IV** estimating the influence of working conditions on the odds of experiencing maternal health complications

$$\text{Ln} = \{p/(1-p)\} = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + e$$

Where,  $e$  = The residual Value/Error Term

$\beta_i$  = The coefficient of  $X_i$   $V_i=1,2,\dots,n$

$\rho$  = Probability of health complication

$(1-\rho)$  = The probability of no health complication

$$\text{Ln} = \{p/(1-p)\} = \log\text{-odds of maternal health to log-odds of maternal health complications}$$

Hence, parameters in model IV are denoted as follows:

$\alpha_0$  = intercept

$\beta_1$  = change in log-odds of maternal health complication with mother's nature of work

$\beta_2$  = change in log-odds of maternal health complication with time mother leaves home in the morning

$\beta_3$  = change in log-odds of maternal health complication mother's returns home from work

$\beta_4$  = change in log-odds of maternal health complication with means of transportation

$\beta_5$  = change in log-odds of maternal health complication with stage at which mother commences maternity leave.

$\beta_6$  = change in log-odds of maternal health complication with mother's relationship with boss.

**Model V** Logistic Regression estimating the influence of social support on the odds of maternal health complications

$$\ln\left\{\frac{p}{1-p}\right\} = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + e$$

Where,  $e$  = The residual Value/Error Term

$\beta_i$  = The coefficient of  $X_i$   $V_i=1,2,\dots,n$

$p$  = Probability of health complication

$(1-p)$  = The probability of no health complication

$$\ln\left\{\frac{p}{1-p}\right\} = \log\text{-odds of maternal health to log-odds of maternal health complications}$$

Hence, parameters in model V are denoted as follows:

$\alpha_0$  = intercept

$\beta_1$  = change in log-odds of maternal health complication with husband's support

$\beta_2$  = change in log-odds of maternal health complication with getting practical help

$\beta_3$  = change in log-odds of maternal health complication with supports from relatives

$\beta_4$  = change in log-odds of maternal health complication with someone to comfort

$\beta_5$  = change in log-odds of maternal health complication with helps from colleagues

$\beta_6$  = change in log-odds of maternal health complication with mother's religion support

The tapes and notes from the key informant interviews were analyzed with the use of content analysis after discussions conducted in the Yoruba language and Pidgin English had been translated and transcribed. Common responses were identified for each topic included in the interview guide. In addition, divergent responses were identified to determine the range of beliefs, opinions, knowledge, attitude and behaviour among participants. Responses to each topic were summarized and important quotations were

reported verbatim to highlight common individual views. On the other hand, the case histories that were generated were subjected to in-depth content analysis. Common themes were identified while an overarching storyline was developed for the purpose of telling a “common story” about mother’s experiences and how those experiences influence maternal health.

## **CHAPTER FOUR**

### **DATA PRESENTATION AND ANALYSIS**

#### **4.0 Introduction**

The primary purpose of this study was to examine the socio-cultural context of pregnant women and how that context precipitates maternal morbidity and mortality. The secondary purpose was to determine cultural beliefs and stereotypes that are associated with maternal health. This study equally investigated the impact of social support on maternal health. However, data collected from questionnaire and interview methods were organized, classified and analyzed. The trends, and patterns and relationship among data were identified and interpreted. The data classification has been carried out on the basis of both nursing and pregnant women. The hypotheses formulated for this study guided the arrangement of the tables. A summary of the main findings follows each hypothesis. The analysis was divided into three-demographic data presentation, answers to research questions and results of hypotheses testing.

#### **4.1 Demographic data**

Demographic data are essential to this study. In the tables below the demographic data are presented. These data are divided into two parts. The first part shows characteristic data of the respondents. The second part shows the cross tabulation of the four independent/predictor variables used in this study.

##### **4.1.1 Demographic Characteristics of the Respondents**

The respondents' local governments of residence were analysed. The findings (panel 1 of Table 4.1) revealed that 380 respondents representing 27.9% were from Alimosho LGA, 337 respondents representing 24.7% were from Ikorodu LGA, 311 respondents representing 22.8% were from Ibeju Lekki LGA and 334 respondents representing 27.9% were from Lagos Island LGA. These findings imply that the four LGAs randomly selected were proportionately covered in selection of sample.

The total of 1362 participants took part in this study. The age characteristics revealed the mean age of the population as 30 years. The age distribution (panel 2 of Table 4.1) shows that there were 133 participants representing 9.8% were within 15-19 years, 382 participants representing 28% were within 20-24 years, 589 participants representing 43.2% were within 25-29 years, 244 participants representing 17.9% were within 30-34 years, 12 participants representing 0.9% were within 35-39 years and 2 participants representing 0.1% were within 40-44 years, while no respondent fall with 45-49 years of ages. The age distribution clearly revealed that women continue childbearing until their early 40s. The higher woman's age the greater the possibility of complications during pregnancy.

The distribution of the respondents by marital status Table 4.1, panel 3) shows that 43 respondents representing 3.2% were single mothers, 1,224 respondents representing 89.9% were married, 45 respondents representing 3.3% were divorced, 22 respondents representing 1.6% were widowed and 28 respondents representing 2.1% were cohabiting. The implication of the marital status distribution is that women still found themselves either taking care of their pregnancy or children alone as single mothers, widows or divorcees. These situations increased the possibility of not having good health care because most women may not have the economic power to survive alone. The distribution by religion (Table 4.1, panel 4) showed that Christians accounted for 57.8% of the sample while 40% were Muslims. Adherents of other religions constituted about 2%.

The distribution by level of education (panel 5, of Table 4.1) shows that 26.6% were illiterate, 5.1% had primary school certificate, 11.7% had secondary school certificate, 54.1% educated up to tertiary level and 2.4% had other forms of education.

The distribution by occupation (panel 6, Table 4.1) revealed that 49% were petty traders, 1.5% were farmers, 21.8% were civil servants, 8.1% were housewives 6 % were unemployed and 13.6% engaged in other occupations.



The income distribution of the respondents (panel 7, Table 4.1) revealed that 23.4% of women reported income of 5,000-10,000 naira, 22.5% had income of 10,0001-30,000 naira, 20.9% had income of 20,001-30,000naira, 11.4% reported income of 30,001-40,000 naira, 6.7% reported income of 40,001-50,000 naira, 9.8% reported income of 50,001-60,000naira, while 9.2% reported above 60,000 naira income.

**Table 4.1: Distribution of Respondents by Demographic Characteristics**

<b>Variables</b>	<b>Frequency</b>	<b>Percent%</b>
<b>1. Local Government Area of Respondents</b>		
Alimosho	380	27.9
Ikorodu	337	24.7
Ibeju Lakki	311	22.8
Lagos island	334	24.5
<b>Total</b>	<b>1362</b>	<b>100.0</b>
<b>2. Age of Respondents'</b>		
15-19	133	9.8
20-24	382	28.0
25-29	589	43.2
30-34	244	17.9
35-39	12	0.9
40-44	2	0.1
45-49	0	0
<b>Mean 30.8</b>		
<b>Total</b>	<b>1362</b>	<b>100.0</b>
<b>3. Marital Status of Respondents'</b>		
Single	43	3.2
Married	1224	89.9
Divorced	45	3.3
Widowed	22	1.6
Cohabiting	28	2.1
<b>Total</b>	<b>1362</b>	<b>100.0</b>
<b>4. Respondents' Religion</b>		
Christianity	787	57.8
Islam	545	40.0
Traditional	17	1.2
Free Thinker	13	1.0
<b>Total</b>	<b>1362</b>	<b>100.0</b>
<b>5. Educational Qualification</b>		
No formal	362	26.6
Primary	70	5.1
Secondary school	160	11.7
Tertiary	737	54.1
Koranic	33	2.4
<b>Total</b>	<b>1362</b>	<b>100.0</b>
<b>6. Respondents' Occupation</b>		
Petty Trading	667	49.0
Farming	20	1.5
Civil	297	21.8
Housewife	111	8.1
Unemployed	82	6.0
Other	185	13.6
<b>Total</b>	<b>1362</b>	<b>100.0</b>
<b>7. Respondents' Income per month</b>		
5000-10000	319	23.4
10001-20000	306	22.5
20001-30000	284	20.9
30001-40000	155	11.4
40001-50000	91	6.7
50001-60000	82	6.0
Above -60,000	125	9.2
<b>Total</b>	<b>1362</b>	<b>100.0</b>

**Source: Field survey, 2011-2012**

#### 4.1.2: Distribution of Respondents by Type of Marriage Consummated, Age at Marriage, Number of wives and Position among Wives

Marriage is very important in the formation of family and maternal health. As panel 1 of Table 4.2 shows, twenty six percent of the respondents had traditional marriage, 49.6% and 10.1% of respondents had Christian and Islamic marriage respectively. This is not surprising, because, there were more Christians in the sample. Only 5.9 percent had civil consummation while 8.4% did not have their marriage formalized. The mean age at marriage is 24.37 years. As shown in Table 4.2, panel 2, 11.5% sampled married between ages 15 and 19, 49.6% and 37.4% married at ages 20-24 and 25-29 respectively and only 1.5% married between 30-34 of age. The age at marriage is an important factor in determining the readiness of the body to accommodate a new life. Also, the table reveals that majority of respondents were the only wife (78.2%). The first wives stand at 9.4%, 10.7% were the second wives, while 1.7% was in the third position and above.

**Table 4.2: Distribution of Respondents by Type of Marriage Contracted, Age at Marriage and Position among Wives**

<b>Variables</b>	<b>Frequency</b>	<b>Percent%</b>
<b>1. Type of Marriage</b>		
Traditional	354	26.0
Church	675	49.6
Islamic	138	10.1
Civil	81	5.9
None	98	7.2
Others	16	1.2
<b>Total</b>	<b>1362</b>	<b>100.0</b>
<b>2. Age at Marriage</b>		
15-19	157	11.5
20-24	675	49.6
25-29	509	37.4
30-34	21	1.5
35-39	0	0
40-44	0	0
45-49	0	0
<b>Mean Age 24.37</b>		
<b>Total</b>	<b>1362</b>	<b>100.0</b>
<b>3. Position Among Wives</b>		
Only wife	1065	78.2
More than one wives	297	21.8
<b>Total</b>	<b>1362</b>	<b>100</b>

Source: Field survey, 2011-2012

#### 4.1.2: Spouse's Demographic Characteristics

Partner's education is also an important factor in assessing maternal health. In panel 1 of Table 4.3, the spouse's educational levels were evaluated. Only 2.7% had no formal education, 2.2% had primary school certificates and 26.7% attended secondary school. About 66% proceeded beyond secondary school level, while only 2.7% attended Koranic schools.

Christianity accounted for 57% of the respondents' partners (Table 4.3, panel 2). Forty one percent were Muslims, 1.4% belong to traditional religion while 0.5% claimed to be free thinkers.

As indicated in Table 4.3, panel 3, petty traders, farmers and artisans constituted 36.6 percent of the total respondents. Also, 41.7% were civil servants while 0.6% were unemployed as at the time of the study.

**Table 4 3: Spouse's Demographic Characteristics**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>1. Spouse Education attainment</b>		
No formal education	37	2.7
Primary	30	2.2
Secondary School	364	26.7
Tertiary	894	65.6
Koranic	37	2.7
<b>Total</b>	<b>1362</b>	<b>100.0</b>
<b>2. Spouse Religion</b>		
Christianity	777	57.0
Islam	559	41.0
Traditional	19	1.4
Free thinker	7	.5
<b>Total</b>	<b>1362</b>	<b>100.0</b>
<b>3. Spouse Occupation</b>		
Petty Trading	47	3.5
Farming	42	3.1
Civil Servant	568	41.7
Artisanship	354	26.0
Unemployed	8	.6
Other	343	25.2
<b>Total</b>	<b>1362</b>	<b>100.0</b>

Source: Field survey, 2011-2012

## 4.2: RESEARCH QUESTIONS

Five research questions were raised and answered; the statements and questions generated in questionnaire were coded, processed and reported in Tables below.

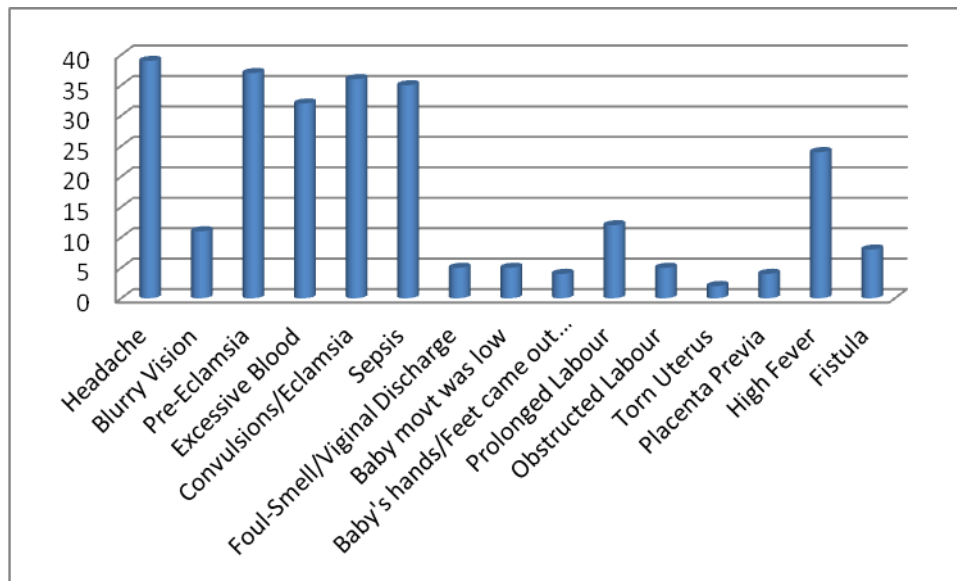
### 4.2.1: Socio-economic factors that precipitate the medical proximate determinants of maternal health.

In answering this research question one, the responses of the participants were grouped into fifteen different proximate determinants of maternal health and the prevalence of these was first determined. The findings are presented in Table 4.4 and Figure 4.1.

**Table 4.4: Whether there was Health Complication during Pregnancy**

Categories	Frequency	Percent
No	499	36.6
Yes	863	63.4
<b>Total</b>	<b>1362</b>	<b>100.0</b>

**Figure 4. 1: Frequency of the Proximate Determinant of Maternal Health**



From the Table 4.4 and Figure 4.1, the distribution of complication status shows that 863 (63.4%) of the 1362 respondents had at least one complication during pregnancy, while 155 (9.9%) in Figure 1 represent those who had just one of the complications. The

figure also shows that, headache, pre-eclampsia, excessive bleeding, eclampsia and sepsis were the most frequent complications.

Four socio-economic characteristics that precipitate the medical proximate determinants of maternal health were identified. These factors are age, occupation, educational attainment and income. These characteristics were cross tabulated against week/month of pregnancy before antenatal visit. The justification of this is that the period of pregnancy before Antenatal visit has been found to be a strong factor predicting presence or absence of complications during delivery and after birth.

**Table 4.5: Cross tabulation of socio-economic factors and period of pregnancy before Antenatal visit**

		Week/Month of Pregnancy Before Antenatal Visit			
		less than or within 3 Month	4 Months and Above	Never	Total
Age group of participants	18-19years	29 ( 2.1)	103(7.5)	1(0.07)	133(9.8)
	20-24years	97 ( 7.1)	270(10.8)	15(1.10)	382(28.0)
	25-29years	141( 10.4)	420(30.8)	28(1.96)	589(43.2)
	30-34years	71( 5.2)	170(12.8)	3(0.22)	244(17.9)
	35-39years	2( 0.14)	10(0.7)	0	12(0.9)
	40-44years	1 ( 0.07)	1(0.07)	0	2(0.1)
	45-49years	-	-	-	-
	<b>Total</b>	<b>341 (25)</b>	<b>974(71.5)</b>	<b>47(3.4)</b>	<b>1362(100)</b>
Occupation	Petty trading	165(12)	481(35.3)	21(1.5)	667(49.0)
	Farming	5(0.3)	15(1.10)	0	20(1.5)
	Civil	90(6.6)	201(14.7)	6(0.4)	297(21.8)
	Housewife	25(1.8)	81(7.0)	5(0.3)	111(8.1)
	Unemployed	15(1.10)	59(4.3)	8(0.5)	82(6.0)
	Others	41(3.0)	137(10)	7(0.5)	185(13.6)
	<b>Total</b>	<b>341(25)</b>	<b>974(71.5)</b>	<b>47(3.4)</b>	<b>1362(100)</b>
Educational Attainment	No formal	93(6.8)	260(19)	9(0.6)	362(26.60)
	Primary	18(1.26)	48(3.5)	4(0.28)	70(5.1)
	Secondary school	26(1.9)	133(9.8)	1(0.07)	160(11.7)
	Tertiary	196(14.3)	511(37.5)	30( 2.2)	737(54.1)
	Koranic	8(0.5)	22(1.6)	3(0. 2)	33(2.4)
	<b>Total</b>	<b>341(25)</b>	<b>974(71.5)</b>	<b>47(3.4)</b>	<b>1362(100.0)</b>
Income	Less than ₦5000-10000	78(5.7)	229(16.8)	12(0.8)	319(23.4)
	₦10001-20000	60(4.4)	232(17)	14(0.98)	306(22.5)
	₦20001-30000	75(5.5)	203(14.9)	6(0.4)	284(20.9)
	₦30001-40000	50(3.6)	101(7.4)	4(0.28)	155(11.4)
	₦40001-50000	23(1.66)	65(4.7)	3(0.2)	91(6.7)
	₦50001-60000	15(1.10)	64(4.6)	3(0.2)	82(6.0)
	Above ₦60000	40(2.9)	80(5.8)	5(0.3)	125(9.2)
	<b>Total</b>	<b>341(25)</b>	<b>974(71.5)</b>	<b>47(3.4)</b>	<b>1362(100.0)</b>

Source: Field survey, 2011-2012

Table 4.5 gives a shocking revelation. Only 341 (25%) of pregnant women attend antenatal within the first three months of pregnancy, 974 (71.5%) of women delay antenatal till the fourth and above months of pregnancy, 47 (3.4%) of women did not attend antenatal at all during pregnancy. The age distribution revealed that most women regardless of their age group delayed antenatal visit till fifth month into pregnancy. It can be concluded that most women attend antenatal but not early into their pregnancy.

Education appears as an important factor that precipitates the medical proximate and maternal health. Women without formal education appear to ignore antenatal (0.6%) while as educational level increases the probability of attending antenatal equally improves. Although, attendance of antenatal is high generally among women, low income was associated with delaying antenatal attendance. Specifically, these factors have direct effect on maternal health.

#### **4.2.2: Cultural Beliefs, Stereotypes and Maternal Health**

There were cultural beliefs and stereotypes identified among women. These cultural beliefs include their perception about place of antenatal, culture-related reasons for choice of place of antenatal, perception about food good or not good for pregnant women and perception about complication during pregnancy.



**Table 4. 6: Cross Tabulation of how Cultural Beliefs and Stereotypes affect Maternal Health**

Cultural Beliefs and Stereotypes	Categories	Freq/Percent	Maternal health Condition	
			Good	Poor
Cultural perception about place of antenatal	Health clinic	747 (54.8)	718(52.7)	29(2.1)
	TBA	142 (10.4)	62(4.5)	80(5.8)
	Spiritual home	28 (2.1)	14(1)	14(1)
	Medicine Store	5 (.4)	-	5(0.4)
	Home/Self	5 (.4)	-	5(0.4)
	Clinic/TBA	372 (27.3)	356(26.10)	16(1.2)
	Clinic/spiritual	60 (4.4)	54(3.9)	6(0.4)
	TBA/spiritual	3 (.2)	-	3(0.2)
	<b>Total</b>	<b>1362 (100)</b>		
Culture-related reasons for choice of place of antenatal	That is the best	819 (60.1)	710(52.1)	109(8)
	It is better to combine	300 (22.0)	287(21)	13(0.9)
	My husband/in-law/ parent's directive	188 (13.8)	108(7.9)	70(5.1)
	Less expensive	28 (2.1)	-	28(2.1)
	Some advice	27(2.0)	-	27(2)
	<b>Total</b>	<b>1362(100)</b>		
Cultural perception about types of food not good for pregnant women	Snail	812(59.6)	312(22.9)	500(36.7)
	Okra	646(47.4)	200(14.6)	446(32.7)
	Snake	1304(9.5)	134(9.8)	4(0.3)
	None	422(31)	312(22.9)	110(8.1)
	<b>Total</b>	<b>1362(100)</b>		
Perception about complication during pregnancy	Normal	314(23.1)	52(3.8)	262(19.2)
	Abnormal	100(7.3)	96(7.0)	4(0.3)
	Indifferent	948 (69.6)	47(3.4)	901(61.2)
	<b>Total</b>	<b>1362(100)</b>		
Stereotypes and beliefs about normal feelings and conditions during pregnancy	Swollen Feet	141(10.3)	46(3.3)	95(6.9)
	Dizziness	263(19.3)	56(4.1)	207(15.1)
	Fatigue	294(21.5)	111(8.1)	183(13.4)
	Other Symptoms	11(0.8)	7(0.5)	4(0.2)
	Multiple Symptoms	655(48)	206(15.1)	449(32.9)
	<b>Total</b>	<b>1362(100)</b>		

**Source: Field survey, 2011-2012**

The cultural perception about place of antenatal was revealed among women sampled. As Table 4.6 shows, majority of women attended health clinic during pregnancy (54.8%) but some of them combined this with visit to TBA (27.3%) and spiritual homes (4.4%). Despite this combination, visit to clinic accounted for higher percentage of women reporting good maternal health (52.7%). Modernity did affect women patronizing traditional birth attendant (TBA) because 10.4% of them used them for antenatal. The reasons women gave for the choice of place of antenatal was deemed important because of its effects on the maternal health. Those who believed that their choice of place of antenatal was the best for them reported good maternal health (52%),

those who combined equally reported good maternal health (21.1%), however those who cited economic reason reported poor maternal health (2.1%) just as those who sought advice from people who were not medical personnel (2%). Those who neglected nutritious foods due to their wrong perception reported poor health (36%). Those who perceived complications during pregnancy as normal reported poor health, i.e. those who perceived swollen feet (6.9), dizziness (15.1), fatigue, (13.4), other (0.2), and more than one symptom (32.2) reported poor health respectively.

All the women who reported complications during pregnancy expectedly reported poor health but this was higher in those who reported excessive blood, low movement of baby and fistula.

#### **4.2.3: Role Conflict and Maternal Health during pregnancy**

**Table 4.7: Frequency distribution by role conflict**

<b>Usual House Chores During Pregnancy</b>	<b>Frequency</b>	<b>Percent</b>
No	216	15.9
Yes	882	64.8
less than usual	264	19.4
Total	1362	100.0
<b>Problem with House Chores</b>		
No	541	39.7
Yes	821	60.3
Total	1362	100.0
<b>Problem with Washing</b>		
No	476	34.9
Yes	886	65.1
Total	1362	100.0
<b>Problem with Going to Market</b>		
No	409	30.0
Yes	953	70.0
Total	1362	100.0
<b>Problem with Cooking</b>		
No	245	18
Yes	1117	82
Total	1362	100.0

**Source: Field survey, 2011-2012**

As Table 4.7 shows, most pregnant women hardly change their workload during pregnancy. Only 15.9% of women indicated that they don't have to carry out their usual

workload, 64.8% of women reported to have worked the same as usual and 19.4% reported that their work load was less than usual. About sixty percent of the respondents experienced conflict in carrying out their house chore because of workload. With specific reference to kind of household task, over 65%, 70% and 82% had problem with washing, going to market and cooking respectively.

**Table 4.8: Role Conflict and Maternal Health**

	Categories	Freq/Percent	Maternal health Conditions	
			Good (%)	Poor (%)
Conditions of house chores	With helping hands	858(70)	940 (69)	18(1)
	Without helping hands	464(34)	215(15.8)	249 (18.2)
Conditions of maternity leave	More than 14 days before delivery	348 (25)	246 (18)	102(7)
	Less than 14 days before delivery	462(33.1)	102(7.2)	360 (26.4)
	Never	382(28)	100(7)	282(21)

**Source: Field survey, 2011-2012**

Role conflict of women appears to have influence on maternal health, pregnant women carrying out their house chore, without helping hands showed higher proportion with poor maternal health (18.2). The conditions of maternity leave also appear important when considering factors that affect maternal health. Those who reported they never went on maternity leave reported poor maternal health (21%).

#### **4.2.4: Working Conditions and Maternal Health**

The working conditions of women have potential influence on maternal health. These conditions include ownership and nature of occupation of women especially during pregnancy, relationship with boss, leave application period and means of transportation.

**Table 4.9: Working Conditions by Maternal Health**

<b>Working conditions</b>	Categories	Freq/Percent	<b>Maternal health Condition</b>	
			Good (%)	Poor (%)
Position	House Wife	157 (11.5)	148(10.8)	9(0.6)
	Owner	638 (46.8)	612(44.9)	26(1.9)
	Employee	567 (41.6)	102(7.4)	465(34)
Nature	Marketing	680(49.9)	46(3.3)	634(46.5)
	Tailor	130 (9.5)	113(8.2)	17(1.2)
	Hair Dresser	110 (8.1)	96(7.0)	14(1.0)
	Administrative	253 (18.6)	112(8.2)	141(10.3)
	Banker	15 (1.1)	5(0.3)	10(0.7)
	Teaching	92 (6.8)	90(6.6)	2(0.14)
	Business	25 (1.8)	12(0.8)	13(0.91)
	Hawking	13 (1.0)	-	13(0.91)
	Casual Worker	43 (3.2)	2(0.14)	41(3.0)
Time of leaving home	Before 6am	314(23)	96(7.0)	218(16)
	After 6am	128(9.3)	44(3.2)	84(6.1)
Distance of office to home	Less than 10km	124(9.1)	102(7.4)	22(1.6)
	More than 10km	548(40.2)	115(8.4)	433(31)
Closing Hours	Before 5pm	248(18.2)	198(14.5)	50(3.6)
	After 5pm	462(33.9)	212(15.5)	250(18.3)
Relationship with boss	Good	1005 (73.8)	986(72.3)	19(1.3)
	Fair	261 (19.2)	242(17.7)	19(1.3)
	Not Good	18 (1.3)	4(0.2)	14(1.0)

**Source: Field survey, 2011-2012**

Working conditions appear to affect maternal health. Housewives who were preoccupied with only house chores for example, reported good maternal health (10.9%) and entrepreneurs or owners of establishment equally reported good maternal health (44.9%). Women in employment of private or government establishments who combined house chores with official assignments reported poorer maternal health (34.1%) when compared with other categories mentioned earlier. There are categories of jobs that pose more danger to pregnant women. For example, marketers reported poorest maternal health when compared to women that owned their businesses. Bankers reported poor maternal health just as hawkers and casual workers. The reasons for this may be due to of the nature of job and rigor involved in carrying out their activities. The

relationship with boss as a measure of role conflict is also an indicator of determinants of maternal health. The women who cited good relationship with their bosses reported good maternal health. The time a pregnant woman leaves for office in the morning and returns also serves as a determinant of pressure on pregnant woman as she may not have enough time to rest.

#### 4.2.5: Social Support and Maternal Health

It has been established that the health impact of stressful events not only depends on the nature of these events but also on the individuals' ability to cope with the crisis and on the extent to which they receive social support from husband, relatives, friends and other members of their social network (Stroebe, 2000).

**Table 4.10: Cross Tabulation of Social Support Factors and Maternal Health**

Social Support Factors		Freq/Percent	Maternal health Condition	
			Good	Poor
Husband rendering help/support in house chores	No	920(67.5)	260(19.5)	660(48)
	Yes	442(32.5)	239(17.5)	203(15)
	<b>Total</b>	<b>1362(100)</b>	<b>499(37)</b>	<b>863(63)</b>
In-laws/relatives rendering help	No	938(68.8)	270(20)	668(49)
	Yes	424(31.2)	229(17)	195(14)
	<b>Total</b>	<b>1362(100)</b>	<b>499(37)</b>	<b>863(63)</b>

**Source: Field survey, 2011-2012**

The bivariate distribution evaluated these measures in relation to maternal health challenges. The essence among others, is to observe the inter connection between the selected indices and maternal health. The result, however, shows that high proportion of respondents that lack any form of social support either from their husbands or relatives recorded poor maternal health.

## **4.3 MULTIVARIATE ANALYSIS**

### **4.3 Introduction**

This part of the chapter contains the results of tested hypotheses and the interpretation of the results. Five hypotheses were tested to confirm the interconnections between selected variables of interest such as (social factors, cultural beliefs and practices, role conflicts and women's working conditions) and variables used to measure maternal health. This necessitated the use of inferential multivariate statistical tests in order to allow more precise prediction in the area of maternal health complications. Therefore, the adopted multivariate technique is logistic regression.

#### **Model 1**

##### **4.3.1 Logistic Regression estimating the influence of socio-demographic factors on the odds of maternal health.**

The interrelationship between some selected socio-demographic variables and maternal health complications were computed in this model to identify socio-demographic correlates of maternal health. In terms of measurement, the dependent variable in this model (maternal health challenges) were measured by means of a checklist containing 15 maternal health complications, some of which include headache, blurry vision, pre-eclampsia, excessive bleeding, convulsions/eclampsia, sepsis, foul-smell/vaginal discharge, baby movement was low, baby's hands/feet came out first, prolonged labour, obstructed labour, torn uterus, placenta previa, high fever, and fistula. Respondents were classified according to whether (at the time of the survey) they had ever experienced at least one of these. All variables were dichotomized into 0 and 1. Where 0 means the absence of complications and 1 denotes suffered/suffering from one or more of the complications. This makes the dependent variable to satisfy the condition for logistic regression.

Table 4.11 shows the odds ratios on the effects of socio-demographic variables on maternal health complications. The overall percentage shows that the model accurately

predicted the outcome results up to 69.9% of the cases and case processing summary has indicated that 100% of 1,362 cases were processed. Also, the Hosmer and Lemeshow Test supported this model as being worthwhile. For the Hosmer and Lemeshow Goodness of fit Test, poor fit is indicated by a significance value less than .05 (Pallant, 2007). In this model, the chi-square value for the Hosmer and Lemeshow Test is 3.062 with a significance level of 0.930. This value is larger than 0.05, and therefore, provides confidence and gives credence to this model.

In this model, the predictors are age of the respondents, educational attainment, occupation, income, religion, marital status, as well as type of marriage consummated. Table 4.11 gives us information about the contribution of each of the predictor variables. The Beta values are equivalent to the B values obtained in a multiple regression analysis, which is use to calculate the probability of a case falling into a specific category. The value of the Wald test indicates how useful each predictor variable is. The basic interpretation of Wald statistic is that any variable with lower “Sig value” less than 0.5 and with bigger “Wald value” is a very useful variable in predicting the value of the dependent variable (Amoo, 2012). Other useful information is the Exp(B) values, which are the odds ratio for each of the independent variables. It represents the change in odds of being in one of the categories of outcome when the value of a predictor increases by one unit (Pallant, 2007). A value less than 1 indicates that an increase in the value of the predictor variable is associated with a decrease in the odds of the event.

The contributions of various factors to maternal health are presented here. Age groups 20-24, 25-29, and 30-34 below 34 years are negatively associated with maternal health complications, indicating that those who are below 34 years are 0.631, 0.621 and 0.756 less likely to have complication before, during and after pregnancy compared to those in age group 15-19 (i.e. the reference category) in the study area. This result conformed to other findings, specifically, those within these age groups had been found to carry the lowest risk of dying during pregnancy and child birth (Olusanya & Amiegheme, 1988). Meanwhile, those in age group 35-44 are positively related to maternal health complications indicating increase in the likelihood of maternal health challenges as age

increases. However, the proportion of the unit change in maternal health is explained by Exp (B) value 1.056. The findings imply an increased risk of maternal health complications among older women. As it has been observed in the literature, this increased risk in older women may not necessarily be explained by obstetric alone, but may also be due to other factors, which could be a decrease of general state of health or less active health seeking behaviour rendering them more at risk (Even-oslen *et al*, 2008; Karlsen, 2011).

Same observations go for the result for educational attainment, where primary school qualification, secondary school qualification and tertiary qualification show negative association with the predicted variable and are 0.631, 0.621 and 0.756 less likely to experience health challenges compare to RC. This implies that the higher the level of education, the less likely the experience of maternal health complications. However, koranic education qualification categories show positive relation to maternal health complications and are 1.762 more likely to report health complication in the study area. The positive association indicated by the data on Table 4.11 can be due to interrelationships among the various measured characteristics in other models as well as to unmeasured characteristics which were not explained in this model. The same observation goes for income which shows a weak association with maternal health complications as indicated by the Wald values. The implication of this finding is that other factors rather than just education and income might be significantly militating against maternal wellbeing that need to be considered in order to ensure maternal health and prevent complications. These findings on education and income had been raised in Phoya and Kang'oma (2005), which stated that women's education and wealth status have no association with the likelihood of having pregnancy complications.

However, all occupational categories are statistically significant to maternal health complications. This could be as a result of the nature of working condition in the study location. The problems associated with maternity and child birth are closely linked to inadequate working conditions (ILO, 2010). Specific result indicated that farming in the study location is positively associated with maternal health complications (Beta value



1.839). Women in this group would be 6.290 times more likely to experience maternal health complication. This could be true because farming involves more exertion of energy and with low income to augment the stress. This statement has been raised in Cheequitita (1999) and ILO (2010) that many women workers have traditionally been concentrated in poorly paid, routine occupations either in informal economy or otherwise under terrible conditions. All other categories of occupation show negative association with maternal health complications with strong Wald value.

In this model, religion shows positive relation with maternal health complications. The result indicated that Muslims are 1.664 times more likely to have maternal health challenges compare to the reference category (Christianity). While traditional religion and free thinkers are 5.992 and 1.505 times more likely to have health complications compared to the reference category. However, this study has demonstrated that, marital status, and type of marriage also have negative association with maternal health complication. Divorced women had 0.003 level of significance, while cohabiting is 1.799 times more likely to be risk of maternal health complications. Furthermore, customary marriage type is significant at p-value 0.000, while respondents with no marriage agreement are 2.206 times more likely to have maternal health complication. This finding supports the claim that the increased risk of maternal mortality among non-married/cohabiting women is indicative of the ways in which women's social and economic disadvantage combine with attitudes towards childbearing outside marriage to affect women's lives (Karlsen, 2011).

**Table: 4.11 Odds Ratio of Logistic Regression on the Influence Social-demographic factors on Proximate Determinant of Maternal Health Complications**

<b>Selected Variables</b>	<b>B</b>	<b>S.E.</b>	<b>Wald</b>	<b>df</b>	<b>Sig.</b>	<b>Exp(B)</b>
<b>Age of the respondents</b>						
15-19	<b>RC</b>	-	-		-	-
20-24	-.461	.242	3.637	1	.057	.631
25-29	-.476	.234	4.155	1	.042	.621
30-34	-.280	.261	1.150	1	.284	.756
35-39	.054	.725	.006	1	.941	1.056
40-44	.388	.147	.000	1	.999	.000
<b>Educational Qualification</b>						
No formal Education	<b>RC</b>	-	-		-	-
Primary Education	-.507	.293	3.000	1	.083	.602
Secondary Education	-.167	.247	.460	1	.498	.846
Tertiary Education	-.027	.186	.020	1	.886	.974
Koranic Education	.566	.507	1.248	1	.264	1.762
<b>Occupation</b>						
Petty Trading	<b>RC</b>	-	-		-	-
Farming	1.839	1.043	3.112	1	.078	6.290
Civil servant	-.306	.162	3.577	1	.059	.736
House wife	-.823	.227	13.139	1	.000	.439
Unemployed	-.655	.264	6.172	1	.013	.519
Others	-.718	.184	15.153	1	.000	.488
<b>Income per Month</b>						
Less than ₦5,000-10,000	<b>RC</b>	-	-		-	-
₦10,001-20,000	.317	.187	2.858	1	.091	1.373
₦20,001-30,000	-.023	.185	.015	1	.903	.978
₦30,001-40,000	.186	.229	.660	1	.417	1.204
₦40,001-50,000	.104	.272	.146	1	.702	1.110
₦50,001-60,000	-.276	.272	1.026	1	.311	.759
Above ₦ 60,000	-.099	.241	.168	1	.682	.906
<b>Religion</b>						
Christian	<b>RC</b>	-	-		-	-
Islamic	.509	.134	14.444	1	.000	1.664
Traditional	1.790	1.049	2.911	1	.088	5.992
Free thinker	.409	.683	.357	1	.550	1.505
<b>Marital Status</b>						
Married	<b>RC</b>	-	-		-	-
Single	-.151	.379	.158	1	.691	.860
Widowed	-.490	.504	.944	1	.331	.613
Divorced	-1.827	.622	8.642	1	.003	.161
Cohabiting	.587	.602	.951	1	.329	1.799
<b>Type of Marriage</b>						
Religion	<b>RC</b>	-	-		-	-
Customary	-.694	.162	18.423	1	.000	.500
Civil/legal	-.399	.254	2.473	1	.116	.671
Consensual	-.496	.290	2.928	1	.087	.609
None	.791	1.128	.492	1	.483	2.206
Constant	1.765	.506	12.147	1	0.000	5.840

2 Log likelihood = 1576.143(a)

Nagelkerke R Square = .116

Sig.0.930

Cox & Snell R Square =.03

Overall Percentage = 69.9 Chi-square 3.062,

Source: Field Survey 2011-2012

RC =Reference Category

## Model 2

### 4.3.2 Logistic Regression estimating the influence of cultural beliefs and stereotypes on the odds of experiencing maternal health complication

This model was computed to identify cultural beliefs and stereotypes correlates of maternal health challenges. Cultural beliefs and stereotype factors were defined as the following:

- Stereotypes belief about feelings and conditions during pregnancy: based on questions on conditions that the respondent feel that is normal to pregnancy.
- Whether they reported the case for care.
- Cultural perception about place of antenatal: measured by a question on place of antenatal care.
- Cultural perception about types of food not good for pregnant women.

Overall, the model is considered useful in analyzing the issue of cultural beliefs and maternal health. The classification table (Table 4.12) shows the accuracy of the model in predicting the influence of cultural belief and stereotypes on maternal health complications. The model shows an accuracy level of 68.9%. The variables were dichotomized to satisfy the condition for logistic regression.

The results from table 4.12 revealed that virtually all symptoms that the women identified as normal to experience in pregnancy (such as swollen feet, dizziness, fatigue and/or experiencing more than one of these symptoms) are positively related to maternal health complications. This simply means that the more the pregnant women experience these conditions the more the likelihood of health complications. Swollen feet, dizziness, fatigue or more than one of these symptoms are Exp(B) 0.021, 0.001, 0.050 and 0.011 respectively, more likely to experience health complication. This could be true because swollen feet may be associated with preeclampsia/toxemia/eclampsia. Also, excessive vomiting can be *Hyperemesis gravidarum*, while dizziness is often a sign of ectopic pregnancy (Ford-Martin & Aron, 2003).

The table also shows that those that seek medical advice and care for these symptoms and those that seek attention but not often are less likely (B-values -0.310 and -0.099) to experience maternal health complication. This implies that the promptness of medical attention during pregnancy, the less likely the incidence of maternal health complications. Moreover, the relationship between those that will not seek medical advice and care on these symptoms is statistically significant at  $p\text{-value} = 0.042$  compared to those that seek attention (the reference category). The same observation goes for place where women sought antenatal care and lodge complaints. Traditional Birth Attendance and those who visited both clinic/TBA (at  $r = 0.289$  and  $0.258$ ) with the predicted variable and with ExpB values 1.335 and 1.294 respectively are more likely to have complications. According to Omorodion (1993), people try to use more than one type of treatment to ensure that they are complementing one another, but danger remains. Thus, women continue to suffer and be at risk.

However, in terms of cultural practices, the result of the analysis shows that observance of harmful practices such as (not eating snail, melon, etc.) is significantly associated with maternal health complication at  $p\text{-value}$  of 0.028 (Table 4.12). Traditional beliefs probably still prevent many pregnant and nursing mothers from securing adequately nutritious food. Denial or avoidance of such foods can adversely affect the health of pregnant women by increasing their chance of suffering from anaemia. Some tradition could also compel them to eat certain health debilitating foods. This could further cause harm to mothers or the expected babies.

### Model 2

**Table:4.12 Logistic Regression estimates of the influence of cultural beliefs and stereotypes on the odds of experiencing maternal health complication**

Selected Variables	B	S.E.	Wald	df	Sig.	Exp(B)
<b>Perceived Normal Symptoms in Pregnancy</b>						
No perceived normal Symptoms	<b>RC</b>	-	-		-	-
Swollen feet	1.203	0.519	5.363	1	0.021	3.329
Dizziness	1.745	.516	11.438	1	0.001	5.728
Fatigue	1.001	.511	3.846	1	0.050	2.722
More than one symptom	1.262	.500	6.387	1	0.011	3.534
<b>Medical Attention</b>						
No Medical Attention	<b>RC</b>	-	-		-	-
Seek medical attention	-.310	.152	4.134	1	0.042	.734
Medical attention not all times	-.099	.154	.416	1	0.519	.906
<b>Place of Antenatal Attendance</b>						
Clinic	<b>RC</b>	-	-		-	-
TBA	.289	.536	.290	1	0.590	1.335
Spiritual Home	-.508	.637	.637	1	0.425	.602
Medicine store	-.873	1.061	.678	1	0.410	.418
Home	-.552	1.065	.269	1	0.604	.576
Clinic/TBA	.258	.492	.275	1	0.600	1.294
Clinic/Spiritual Home	-.088	.569	.024	1	0.878	.916
<b>Cultural Practices</b>						
Non Observer of Cultural Practices	<b>RC</b>	-	-		-	-
Observer of Harmful Cultural Practices	-.374	.170	4.831	1	0.028	.688
Observer of Non Harmful Cultural Practices	-.121	.163	.548	1	0.459	.886
Constant	-.039	.708	.003	1	0.956	.962
2 Log likelihood = 1631.602(a)		Cox & Snell R Square = .045				
Nagelkerke R Square = .063		Overall Percentage = 68.9				

Source: Field Survey 2011-2012

RC =Reference Category

### Model 3

#### 4.3.3 Logistic Regression estimating the influence of role conflicts on the odds of experiencing maternal health complication

In this model, the interrelationship between role conflicts and maternal health was evaluated. Two models were used; in the first segment, role conflicts were evaluated by problems encountered carrying out house chores due to paid-work demand, performance of house chore either with or without other helping hands, time taken to rest, etc. The

dependent variable is represented by maternal health complications. This was also captured as binary dichotomous variable represented by 1 and 0. This is captured in Table 4.13 below;

### Model 3

**Table: 4.13 Logistic Regression estimates of the influence of role conflicts on maternal health**

Independent Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Not Experiencing Conflict with House Chores	<b>RC</b>	-	-		-	-
Experienced conflict with house chores	-.219	.121	3.271	1	0.071	.803
Not Experiencing Conflict going to Market	<b>RC</b>	-	-		-	-
Experienced Conflict going to Market	.085	.128	.441	1	0.507	1.089
Not Experiencing Conflict Washing	<b>RC</b>	-	-		-	-
Experienced Conflict Washing	.252	.123	4.204	1	0.040	1.287
Have Time to Rest	<b>RC</b>	-	-		-	-
Having no time to Rest1	-.226	.119	3.620	1	0.057	.798
Constant	.826	.161	26.469	1	.000	2.284
2 Log likelihood = 1682.137(a)			Cox & Snell R Square = .009			
Nagelkerke R Square = .012			Overall Percentage = 68.6			
Source: Field Survey 2011-2012			RC =Reference Category			

The classification table (Table 4.13) shows the accuracy of the prediction of maternal health challenges with respect to role conflict indices. The overall percentage provided an overview that the model correctly predicts the outcome variable up to 68.9 percent of the cases. It is also important to mention that case processing summary indicates that 100% of 1,362 cases were processed.

Hosmer and Lemeshow Test support this model as being worthwhile. For the Hosmer and Lemeshow Goodness of fit Test, poor fit is indicated by a significance value less than .05 (Pallant, 2007). In this model, the chi-square value for the Hosmer and Lemeshow Test is 2.623 with a significance level of 0.854. This value is larger than .05, therefore indicating support for the model.

The results show, among others, that pre-occupation with market activities by the wife shows positive correlation with experiencing of maternal health complications. This

could be true because those who experienced conflict are 1.089 times more likely to experience health complications compared to the reference category (RC). However, having conflict with general house chores, washing and not having enough time to rest are significantly associated with maternal health complication at p-values 0.071, 0.040 and 0.057 respectively (Table 4.13). Where there are role conflicts, women are 2.284 times more likely to experience maternal health complications vis-à-vis the Reference Category (RC). This could be true because striving to meet or satisfy multiple roles at home can engender stress (Lu, 2011; Fadayomi, 1991), and, when physical or emotional stress builds up to uncomfortable levels, it can be harmful for pregnant women (March of dimes, 2010).

There is a negative relation between time spent for rest and health complication. This implies that the higher the amount of time spent for rest at home the lower the probability of experiencing health complications. The result is also statistically significant at p-value = 0.057. This could be true, as a pregnant woman needs more rest and sleep to maintain her well-being and that of the fetus (Insel and Roth, 2004). In that regard, the increase in workloads and decreased attention to rest and relaxation as it had been identified in literature could be harmful to maternal health.

#### **Model 4**

##### **4.3.4 Logistic Regression estimating the influence of working conditions on the odds of experiencing maternal health complications**

To gain understanding of the influence of working condition in Lagos State on maternal health, attentions were placed on specific working conditions and maternal health status. This was done to ascertain the specific correlates of maternal health among the selected in-depth variables. The information from other category of women workers was captured separately. This information was obtained from in-depth-interviews and case study. Women were required to state their nature of job, when they normally leave home for work and when they return. Also, the mothers were asked about the means of

transportation, when they commenced maternity leave and the relationship with their boss if applicable. Maternal health was measured in terms of personal experience of complications both during and after delivery. Respondents were stratified into ever and never experienced complications (at the time of the survey). The variable was later dichotomized to satisfy the condition for logistic regression. The model thus tested, and the result of the logistic regression analysis (Table 4.14), shows the accuracy of the prediction of mothers' working conditions in respect to the maternal health. The overall percentage for the prediction of the outcome variable indicates 68.9 percent level of accuracy.

The result of Hosmer and Lemeshow Test also supports this model as logical. For the Hosmer and Lemeshow Goodness of fit Test, poor fit is indicated by a significance value less than .05 (Pallant, 2007). In this model, the chi-square value for the Hosmer and Lemeshow Test is 10.439 with a significance level of 0.236. This value is larger than 0.05, therefore indicating support for the model. This also provides confidence that model 4 is relevant in demonstrating the influence of working conditions on maternal health.

The coefficients for these predictors (the independent variables) show the direction of correlation between each independent variable and the dependent variable. The test used is known as Wald test, and it shows the value of the statistic for each predictor. The usefulness of the information on the table is provided by the Exp (B) column. The values are the odd ratios for each of the independent variables, which represent the change in odds of being in one of the categories of outcome when the value of a predictor increases by one unit. A value less than 1 point out that an increase in the value of the predictor variable is related with a decrease in the odds of event.

In this model, the nature of work such as marketing, tailoring, business and hawking are significantly associated with maternal health complications. While marketers, business women, and hawkers would be 1.705, 7.427 and 4.284 times, more likely to report health complications respectively, tailoring is negatively associated and would only be



less than one time likely to report complications as indicated by Exp (B) of 0.370 (Table 4.14). Interestingly, those who are in the banking sector are negatively related to maternal health complications and would be less than one time (0.925) likely to report maternal health complications. This could be accounted by other factors that were not included in this model.

The time in which a woman leaves home for work and return back home are also an indicator of working conditions. Table 4.14 indicated leaving home between 5-7am and after 7am are positively related to maternal health challenges, the results indicated that women that leaves home for work between 5-7am are 1.138 times likely to have maternal health challenges than those who leaves for work after 7am. However, the Wald values indicate weaker points of 0.365 and 0.190 respectively. This means the time leaving for work is a weak variable in describing the odds of having health challenges. However, women that are returning home after day work beyond 4pm are positively associated with health complications and statistically significant (0.003) with odds ratio 1.719 and Wald value 8.757 (Table 4.14). This result support the findings in Giddens (2002), which states that more time, spent at work means less time available for family life and rest.

Some observation goes for means of transportation where private/official vehicle category show a negative association with maternal health complications 0.927 less likely to report complications. Public transportation is 0.015 statistically significant with odds ration 2.143 (Table 4.14) more likely to report complications. The same observation goes for the periods at which pregnant women commence maternity leave, where those delivered of a baby before they commence maternity leave statistically significant at p-value=0.98 and 7.059 more likely to have complication. This is not surprising, as it has been discovered by cheequitita (1999) and ILO (2010) that in sub-Saharan Africa, where the highest rates of maternal mortality are reported, more than 80 percent of women workers are considered to be working in precarious and vulnerable conditions. However, surprisingly, house wife is statistically significant at p-value

0.051, this can be accounted for by other factors that are associated with woman empowerment that are not considered in this model.

The relationship with the boss where applicable, was also considered in this model. The data revealed that those that are not in good relationship with their boss are 4.702 more likely to have health complications at p-value 0.014 (Table 4.14).

## Model 4

**Table: 4.14 Logistic Regression estimates of the influence of working conditions on maternal health**

Selected Variables	B	S.E.	Wald	Df	Sig.	Exp(B)
<b>Nature of Work</b>						
Unemployed	<b>RC</b>	-	-		-	-
Marketing	.533	.278	3.673	1	0.055	1.705
Tailor	-.995	.365	7.428	1	0.006	.370
Hair Dresser	.105	.214	.240	1	0.624	1.110
Administrative	.263	.557	.223	1	0.636	1.301
Banker	-.078	.275	.079	1	0.778	.925
Teaching	.349	.472	.548	1	0.459	1.418
Business	2.005	1.046	3.674	1	0.055	7.427
Hawking	1.455	.510	8.152	1	0.004	4.284
<b>Time Leaving Home for Work</b>						
Unemployed	<b>RC</b>	-	-		-	-
5-7 am(1)	.129	.214	.363	1	0.547	1.138
After 7 am(1)	.096	.220	.190	1	0.663	1.101
<b>Time Returning Home</b>						
Between 2-4 pm	<b>RC</b>	-	-		-	-
Beyond 4 pm	.542	.183	8.757	1	0.003	1.719
<b>Means of Transportation</b>						
Official/Private	<b>RC</b>	-	-		-	-
Public	.762	.314	5.895	1	0.015	2.143
<b>Commencement of maternity leave</b>						
Self Employed	<b>RC</b>	-	-		-	-
Leave 1-2week to delivery(1)	1.933	1.182	2.674	1	0.102	6.907
Leave start at delivery 2(1)	1.954	1.183	2.730	1	0.098	7.059
House wife (1)	2.410	1.236	3.803	1	0.051	11.138
<b>Relationship with boss</b>						
Good relationship	<b>RC</b>	-	-		-	-
Fair/bad relationship	1.548	.629	6.048	1	0.014	4.702
Constant	-1.523	1.201	1.608	1	.205	.218
Over all percentage 68.9      Cox & Snell R Square 0.040,      Nagelkerke R Square 0.057						
-2 Log likelihood 1037.796(a),      Chi-square-10.439 sig. 0.236						
Source: Field Survey 2011-2012      RC =Reference Category						

## Model 5

### 4.3.5 Logistic Regression estimating the influence of social support on the odds of maternal health complications

This section measures the relation between social support and maternal health. Attention was placed on the interpersonal support system on the premises that support promotes well being by protecting people from the effects of stress, while other categories have been captured separately. The respondents were asked whether their husbands normally help them with the house chore, whether there is someone to turn to when there is a need for practical help, or the relatives/in-laws are there to give support, whether there is someone to turn to for comfort or share concerns and if the colleagues do help to do their duties when necessary and also, the influence of religion on maternal health.

The classification table (Table 4.15) shows the accuracy of the prediction of maternal health challenges with respect to social support indices used. The overall percentage provided an overview that the outcome results in an accurate prediction for 68.7 percent of the cases. It is also important to mention that case processing summary has indicated that 100% of 1362 cases were processed. The same goes for the Hosmer and Lemeshow Goodness of fit Test, the chi-square value for the Hosmer and Lemeshow Test is 0.746 with a significance level of 0.946. This value is larger than 0.05, therefore indicating support for the model. The patterns of influence of the measures are highlighted below.

The table below (Table 4.15) shows importantly, that no husband's support in terms of help with house chores and other is negatively associated with maternal health complications with B value -539. This indicates that the more help from husband, the less likely it is that they will report maternal health complication. Not having husband support is also a significant predictor, according to Sig. value ( $p=.018$ ). The odds ratio for this variable, however, is 0.583, a value less than 1. This indicates that the more partner's support, the less likely a woman will experience health complication.

In this model, the odds of a person answering No, they do not get practical help, is 1.465 times higher for someone who does not get practical help than for a person who gets practical help during pregnancy. Also, in-law/relative support shows a negative B value (-0.076). This indicates that the more help a pregnant woman get from in-laws/relatives, the less likely it is that she will report having health complication.

In the same vein, having someone one could turn to for comfort and discussion, and also, colleague to help out on some duties are negatively associated with maternal health complication, with B-value -1.273 and -1.394 respectively. These are statistically significant with Sig. value 0.062 and 0.033 correspondingly. This finding could be true, considering the fact that, support may help an individual gain, regain, or use personal strength during difficult adaptive periods which demand more energy and resources, thus it can be expected to affect health during pregnancy and social support serves as an environmental mediator and influences a woman's experiences and the outcome of pregnancy (Haobijan, Sharna, and David, 2010).

It is also very important to indicate here that result of the analysis also shows that those who are not attending religious house for support vis- a-vis RC are 0.084 statistically significant and are more likely to have complication with odds value 2.624. This result is not strange because it has been found out that religious involvement is related to better mental and physical health, improved coping with illness, and improved medical outcome (Bussing *et al*, 2009).

## Model 5

**Table: 4.15 Logistic Regression estimates of the influence of social support on maternal health**

	<b>B</b>	<b>S.E.</b>	<b>Wald</b>	<b>df</b>	<b>Sig.</b>	<b>Exp(B)</b>
Get Husband's Support	<b>RC</b>	-	-		-	-
No Husband's Support	-.539	.228	5.573		0.018	.583
Get Support for Practical Help	<b>RC</b>	-	-		-	-
No Support for practical help	.382	.956	.160	1	0.690	1.465
Get in-law/relative Support	<b>RC</b>	-	-		-	-
No in-law/relative Support	-.076	.595	.016	1	0.898	.927
Someone comfort/listen Support	<b>RC</b>	-	-		-	-
No one to comfort/listen Support	-1.273	.681	3.494	1	0.062	.280
Colleagues Help	<b>RC</b>	-	-		-	-
No colleague Help	-1.394	.653	4.552	1	0.033	.248
Religion for support	<b>RC</b>	-	-		-	-
No to Religion for support	.965	.558	2.990	1	0.084	2.624
Constant	1.760	1.625	1.172	1	.279	5.811
Overall Percentage 68.7%, Cox & Snell R Square 0.024, Nagelkerke R Square 0.033, -2 Log likelihood 1661.378(a) Hosmer and Lemeshow Test-0.746, sig. 0.946						

Source: Field Survey 2011-2012

RC =Reference Category

## 4.4: CASE STUDIES

The cases below represent follow up studies. Four cases were studied across the four LGAs, but these have been subsumed under two categories below. The two categories presented had the same maternal health history but handled in different ways. It will be adequate to state that, all names that are used in the cases are fictitious. They, however, represent real persons observed in the field.

### Case One

Mrs Okon is 33 years old and her family composes of her husband, a son and a daughter 4 and 2 and half years old respectively and her niece. They live in Ikeja, Lagos State. She works with one of the state parastatals as an administrative officer, while her husband also works with one of the companies around. Although the family is of middle

level income earner, they have a strong value for health. Mrs. Okon had a history of preeclampsia (pregnancy induced hypertension), which she had to manage effectively during the first two pregnancies. In her words *“the experience during the first pregnancy was not pleasant at all. Being my first pregnancy, the situation was so strange; I had to be hospitalized for almost a month and continued to be monitored until delivery. Then, I had not joined where I am working now”*. She lives close to her place of work. The second pregnancy was a bit easy for Mrs. Okon because she was aware of her medical history. She normally had her deliveries through Cesarean Sections (CS). Now, Mrs. Okon is pregnant again, the third time. *“It was a mistake, because I and my husband had decided we are going to stop after the first two, now there is nothing I can do because the baby is a gift from God and only he knows what the child will become in future”*, she stated. She was advised to register in Lagos Island Maternity Hospital, since Ayinke House (the maternity section of the Lagos State Teaching Hospital) where she gave birth to her first two babies was under reconstruction. She would not be allowed to fall into labour before the operation is embarked on, because of her medical history. I met Mrs. Okon the day she was to call her husband and/or any one that was to stay with her in the hospital because; the operation was going to be booked for early hours the following day. Mrs. Okon was delivered of a baby girl, and today the baby and the mother are perfectly doing well.

### **Case Two**

Mrs. Adekanmi is 23 years old and a petty trader, the second of her husband's two wives. She resides at Ibeju Lekki with her husband and the first wife. Mrs. Adekanmi sells different types of vegetables and she normally travels to one of the neighbouring towns Ijebu land, Ogun, State early in the morning to buy vegetables and come back to Ibeju to sell. In her words, *“these vegetables don't yield well in this area because of the nature of the soil. They are therefore scarce. And because of their nature one cannot keep them for a long time”*. She goes to Ijebu every alternate day to buy the vegetables and sit in front of the house to sell. Mrs. Adekanmi got pregnant and had to move in with the man responsible for the pregnancy, a 30 year old man who happened to have a

wife already and works as an auto mechanic. In the course of the pregnancy, she normally feels uncomfortable within; though she registered in the General Hospital for antenatal she also patronized the herbal medicine practitioners for treatment. *“It got to a stage two weeks ago I fell and I had to be rushed to the hospital and the baby was evacuated....5 months pregnancy”*, she recalled. She suffered from convulsion, apparently she had been suffering from preeclampsia because of lack of attention, and it degenerated to eclampsia. I met Mrs. Adekanmi weeks after the loss, during the field work. From my interaction with her, one could pinpoint her ordeal and her neighbours also witness to the same. For instance, I got to that particular house and requested for a pregnant woman or someone that just gave birth. Someone mentioned her name and some other persons said, “No, don’t call her”. I wondered why. Then someone told me that “she just lost her pregnancy two weeks ago, she is not happy and she will not be able to answer you”. I got interested in her, and then I had to persuade her to give me attention. I guess she is fine now.

The above case studies highlight the plight of mothers during pregnancy. The cases point to important issues regarding maternal health. The issues of knowledge, education, economic status, prompt and adequate attention and social support are very critical to the success recorded in the first case while the loss recorded in the second case are due to lack of these. As one gynecologist said, *“most of the women we see in emergency section were not registered in this hospital or registered and came for the antenatal once”*.

In the first case, the knowledge of her condition and economic status were factors that contributed to the success of the treatment.

Another important thing to note is that of social support in the two cases. It can be inferred from the second case lack of social support due to her non acceptance into the husband family created psychological pressure and distress during pregnancy. This may prevent an individual from being able to maintain good health when combined with the burden of pregnancy.



#### **4.5: DISCUSSION OF FINDINGS**

There is a growing recognition of the maternal health challenges, diagnostic and intervention strategies as predominantly related to medical condition of women, whereas, there are socio-cultural conditions that need to be monitored in order to reduce the risk of maternal health complications. This study examined some of these socio-cultural conditions. This section highlights findings from this study.

Four socio-economic measures were considered: education, occupation, age, and income. The results from the first hypothesis show variation in the association of socioeconomic status and antenatal attendance. The benefits of antenatal care in influencing outcomes of pregnancy depend to a large extent on the timing of the antenatal care as well as the content and quality of service provided (Phoya and Kamg'oma, 2005). Therefore, women are advised to have a minimum of four antenatal visits spread throughout the pregnancy, with the first visit in the first trimester. The findings revealed that 2.7% of pregnant women attend antenatal in the first one month of pregnancy, 2.6% of women attend antenatal in the first three months of pregnancy, 24.8% of women delay antenatal till the forth month of pregnancy, 37.5% of women delay antenatal till the fifth month of pregnancy and 32.3% of women did not attend antenatal at all during pregnancy. The findings equally revealed that most women regardless of their age delayed antenatal visit till fifth month into pregnancy. About 15.5% of women between 36 and 41 years never attended antenatal. It can be concluded that women attend antenatal but not early into their pregnancy, and therefore, most women miss out of intended benefits of early antenatal care. Earlier findings indicated that attendance of antenatal care is a determinant factor in maternal health. These conditions include complications during pregnancy and prompt attention in case of medical challenges and monitoring of fetus. Antenatal care is generally acknowledged as an effective method of preventing adverse outcomes in pregnant women and their babies. The present pattern of routine antenatal care in Nigeria consists of a first antenatal or 'booking' visit at around 12 weeks gestation, followed by monthly visits up to 28 weeks, fortnight visits up to 36 weeks and weekly visits thereafter. Observational

studies suggest an association between gestational age at initiation of antenatal care and outcomes for mothers and babies (Gortmaker 1979, Ryan, Sweeney, Solala, 1980 and Quick, Greenlick and Roghmann, 1981). Many antenatal screening tests, including ultrasonography for the detection of fetal anomalies and biochemical screening for neural tube defects and Down's syndrome, take place during the first trimester or early in the second trimester. Women who initiate antenatal care after this time may be denied the opportunity to benefit from these screening tests.

Education appears as an important factor that precipitates the medical proximate and maternal health. Women without formal education appear to ignore antenatal and as level of education increases the probability of attending antenatal equally increases. Although, attendance of antenatal is high generally among women, low income was associated with delayed antenatal. The findings of the present study are in agreement with earlier studies. Oxaal and Baden, (1996) reported that educated women have more understanding of the physiology of reproduction and are less disposed to accept the complications and risks of pregnancy as inevitable, than illiterate or uneducated women. Graczyk (2007) opined that lack of education affects health because it limits young women's knowledge about nutrition, birth spacing, and contraception. These results highlight variation in the association of socioeconomic status with attendance of antenatal. Most of the respondents with low level of education seem to have positive disposition to maternal health care utilization in terms of attending ante natal care. Education is a key determinant of maternal health. Not only does education lead to higher income and greater awareness of important maternal health indicators (Fadeyi, 2007), it also enhances the value for a healthy life style. Studies have shown that educated women are more likely to take measures to protect themselves, accept change and be more receptive to prevention messages. Another benefit of education according to UNFPA (2005) is the increased ability to think critically and analyze situations before acting, however, the odds of a woman with higher educational qualification in the multivariate analysis is 2.177 higher. This could be as a result of other factors associated with higher education that need to be identified to improve maternal health. A study in Paraguay has reported that maternal health knowledge would be improved with wide

application of community-based antenatal care program to meet the needs of those who are functionally illiterate (Ohnishi, Nakamura, Takano, 2005).

The state of maternal health is worsened by economic situation. The unprecedented harsh economic climate is increasingly influencing maternal health outcome. Majority of the respondents earn below 20,000 naira as income per month and engage in economic activities that are tedious even during pregnancy. They live on daily income and this makes it mandatory for them to keep working in order to meet the daily needs and support the home front. The socioeconomic pressures brought about by lack of opportunities and high levels of unemployment push pregnant women into risky activities just to generate income. When asked what she does and the activities involved in the business, one respondent said the following:

*My business is seasonal. I sell whatever is in season for that period. For instance, this period we have fruits, I will have to wake up as early as 5.30am to go to Jakande market in Ketu or Mile 12 to buy and come to sell here in Egbeda.*

The apparent low standard of living during pregnancy due to economic crunch might actually be an indication for irregular pattern of food intake necessary to sustain the body during pregnancy. This is a major risk factor for the trend of maternal health complication that was observed during the course of this study. The quantity and quality of food intake among expectant mothers is vital for their overall wellbeing. From the key informant interview with the medical practitioners the issue of anemia emerged as major risk factor in pregnancy that was re-emphasized, a pregnant woman needs to eat the right kind of food regularly as anemia in pregnancy remains a major threat to maternal health. One of the medical practitioners said, “Most women don’t eat right nutrition that can sustain them and the fetus during pregnancy largely due to lack of money”. In pregnancy, women require an extra 300 calories above their normal daily intake to meet the needs of their growing baby; so also, the mother’s. When a pregnant woman is not eating balanced meals, the body may lack the required level of iron, and at this stage the body requires iron in double of the normal requirement in pregnancy. Another critical nutrient in pregnancy is folic acid. Pregnant women and those planning

a pregnancy in particular should get 400 micrograms of folic acid in food daily or supplement form (Ford-martin & Aron, 2003). The findings show that 10.4% of the sample either cannot afford balanced diet, skip meals or eating less because the food is not enough. Similarly, on average, only 9.8% of women declared taking folic acid before getting pregnant.

The study also revealed that most pregnant women are so engrossed in economic activities that they overlook early signs of complications and resort to traditional medicine in emergency, especially because it is cheaper. Below is an excerpt from a case subject in Ikorodu:

*I used to attend my antenatal when it is my appointment day. Since my father in-law is **alagbo** (herbal medicine practitioner), no need of wasting money to go and complain for dizziness in the hospital I always complain to him and he will give me the remedy (A woman of 23 years old, Ikorodu).*

Although the role of traditional medicine and its potentials have been receiving attention in the past decade, the danger here is that most herbal medicine practices have been “commercialized” in Lagos that most herbal medicine sellers sell to make a living from it even without adequate knowledge. Also from the same case subject in Ikorodu:

*I also used to help him to sell the medicines and through that, I was able to start the business.*

The fear here is what is being dispensed is on trial and error basis and without accurate measures since large quantity and variety of herbs are often prescribed for a single ailment (Amutabi, 2008). This fact was further established by one of the medical practitioners who said that:

*most pregnant women report to the maternity center late and by the time they come is either they have still birth or liver problem that they have to be referred for dialysis. (Medical Practitioner, from Lagos Island).*

The finding of the first hypothesis in model 1 revealed a significant influence of social factors on proximate determinants of maternal health. The findings of this present study agree with earlier findings. Chukuezi (2010) talked about women’s low status in the society, lack of access to and control over resources, limited education opportunities,

poor nutrition as impacting on women's health. Afsana and Rashid (2000) found that women in rural areas often experience lower literacy rates, lower social status, poorer economic conditions, oppressive social customs, and poor quality health care services. The connection between social factors and maternal health may not be direct. But, these factors affect not only utilization of maternal health services, but also exert pressure on the body thereby causing women to become susceptible to complications. Utilization of maternal health services is associated with improved maternal and neonatal health outcomes.

However, some studies in the past have not yielded a consistent pattern of relationships between service utilization and individual and household predictors. Elo (1992) showed that women with primary level education were more likely to utilize maternal health services compared to those without any formal education. Raghupathy (1996) did not record any significant difference between the two educational groups. Whereas many studies found a positive correlation between age and the use of skilled attendants at child birth (Celik and, Hotchkiss, 2000, Navaneetham and Dharmalingam, 2002), others have found a curvilinear relationship (Obermeyer and Potte, 1996; Gage, 1998). This also can be in this study. Women irrespective of age and education attend antenatal, but when and frequency of attendance is worthy of attention.

The interaction effect of the socio-cultural variables on maternal health in Lagos State was further explored by examining the cultural beliefs and stereotypes associated with pregnancy. The results of the second hypothesis revealed a significant influence of cultural beliefs and practices on maternal health. Cultural beliefs, attitudes and practices have been found to be one of the main factors affecting maternal health in Africa. These factors along with poverty and the inaccessibility of existing health facilities have resulted in low use of antenatal services, delivery and postnatal care as revealed by findings of studies conducted in Africa. Food restrictions and taboos constitute a major area of cultural impact that creates problems for pregnant women. In some rural societies women eat food after men. Depending on the quantity and quality of food available, a pregnant woman who eats left-overs may also lack sufficient nutrition

(Chukuezi, 2010). Severe anemia plays a part in up to 40 per cent of the estimated 600,000 maternal deaths each year in the developing world (UNFPA, 2005).

Ogbuagu (2004) and Chukuezi (2010) found that pregnant women in Nigeria are not encouraged to eat snails. The result of this study agrees with Ogbuagu and Chukuezi's finding. Snails are rich in calcium, to avoid babies drooling. Denial or avoidance of such foods can adversely affect the health of pregnant women by increasing their chances of suffering from anemia. Some people believe that while the fetus resides in the womb, it absorbs information which develops its personality and physical appearance. The expectant mother may fear that if she does not consume the item that she craves, for her baby will take on (physical) characteristics of that food. Cultural beliefs, practices and taboos organized according to mainstream societal values dominated by patriarchal values of male superiority and preference exacerbate difficulties of pregnancy and childbirth often leading to maternal mortality or morbidity. Many of these traditions may be harmless and some may be beneficial, but others can be damaging to both mother and infant. Many conflicts and misunderstandings in patient care are a direct result of the division between the values of the health care culture and those of the patient. This implies that acknowledging patient cultural differences and utilizing them to individualize health care will positively affect the patient's experience and response to pregnancy and childbirth.

Another major risk from cultural beliefs and stereotype was from the misconception that certain feelings and experiences were 'normal' in pregnancy. But these stereotypes invariably had influence on women's health. In the first instance, majority of the women believed that swollen legs, vomiting, dizziness and others are usual occurrences during pregnancy. However, a few respondents with higher level of education and better income report to their health care provider on noticing such abnormalities while pregnant. Sadly, among the literate category, some still belief that these signs are normal to pregnancy. Maternal health complications can, therefore, be understood from this perspective. This finding corroborates previous studies (Idowu, 2011). Although these feelings can be said to be signs of pregnancy, a deeper look at this attitude reveals that

most women are at risk. Swollen legs may be associated with preeclampsia/toxemia/eclampsia. Also, excessive vomiting can be *Hyperemesis gravidarum*, while dizziness is often a sign of ectopic pregnancy. Pregnant women who believe that these signs are normal tend to get themselves into complications that could have been controlled earlier (Ford-martin & Aron, 2003). This supported the findings by Chiwuzi, Braimoh, Unuigbo and Olumeko (1995), which emphasized the inability of women to recognize early warning signs even when clear evidence of danger existed.

Women's entry into the labour force, along with their continued role as primary caretakers and its associated domestic responsibilities, were frequently mentioned as a major source of pressure on their health. Role conflict of women appears to have influence on maternal health, pregnant women carrying out their house chores without helping hands showed higher poor maternal health (18.2%). The conditions of maternity leave also appear important when considering factors that affect maternal health, like those who reported that they never go for maternity leave equally reported poor maternal health (21%). Many individuals argue that the reason for this phenomenon has been primarily economic. Most women work because of economic necessity rather than by choice (Fadayomi, 1991). The spillover effect of this has been identified as a threat to maternal health, as majority of the respondents indicated having difficulty combining work with home chores during pregnancy. For instance, a mother who is employed full-time may experience role conflict, because of the norms that are associated with the two roles. She is expected to spend a great deal of time cooking, taking care of her children, and also, simultaneously cope with the demands in her work place. This was found to be so significant to maternal health as the findings from the logistic regression analysis of the third hypothesis indicated a significant influence of role conflict on maternal health.

Work-life conflict is a situation where there is an inter-role conflict between work and family demands (Higgins, Duxbury & Lyons, 2007). Conflict of expectations between the management, customers and home front causes stress (Parkington & Schneider, 1979). This conflict does affect psychological functioning (Schieman, McBrier & Gundy, 2003). The issues of work-life balance, workplace culture and maternity and

childcare are clearly interrelated and affect a majority of workers at some point in their lives. These issues are particularly relevant for those facing a crisis pregnancy as they may, according to individual circumstances, inform or influence the decision-making process around such a pregnancy in terms of the options, supports or constraints facing the individual.

Occupational variations with reference to working in formal or informal sectors did not appear to have influence on perception of role conflicts, as most self employed respondents still indicate role conflicts.

Expression of role conflicts varied with educational level. For instance, educated women perceived the situation as more unpleasant and they would like to reduce the pressure if they have the opportunity, while women with low level of education saw it as the duties they have to perform. While acknowledging the difficult conditions they face during pregnancy, one of the mothers said:

*I will have to do my normal chore., I didn't have a choice. I cannot say am pregnant and not do my duties, except when my sister is around that is when I decide not to bother myself.... Sometime I feel like staying back home to rest, but the problems with the situation is because my source of income is in Eko, Idumota, I am forced to go there every morning, if not no food on the table. (34 years old womam from Alimosho LGA).*

Doyel (2002), did not consider home a resting place for women. Home is often regarded as a refuge from the pressures of work and the outside world, but for women who are still primarily responsible for home and child care, home often means unceasing demands from children and other family members and the increased burden of household tasks. Not only do they come home late, women after a busy day's work, branch off to the market to get some stuff for cooking and then get back home to perform their socio-cultural role. Lack of constant electricity supply force women to go to market as often as the needs at home demanded.

It is also interesting to know that having control over role conflicts is influenced by income status. For instance, the level of husbands' involvement with household chores is related to education and economic status. Educated women with higher income and



husbands' support can reduce the work load by employing domestic workers or keeping relatives that can be of help.

When asked how she has been coping with the demands of work and home with pregnancy, a banker and wife responded as follows:

*Sincerely speaking, it exerts some pressure on me. What I do to reduce the stress is that, during the weekends I do call one woman that normally wash clothes for me and clean the house. Also, I have a caterer that I pay to help me to prepare stew and soup that I keep in the refrigerator which can last up to a month at a time. And if my husband gets home before me, he helps bring out soup or stew to hasten the cooking for the night. The only challenge with this is the irregular power supply. (28 years old mother from Alimosho LGA).*

In some cases, the respondents did not have any form of assistance from relatives. The high level of risk is shown by how much these women become susceptible to miscarriage which is largely attributable to stress in its various forms, that is physical or mental stress. A respondent from Egbeda said,

*"I had two miscarriages. I don't know why. I went to the hospital when I noticed I wasn't getting myself well. It (the pregnancy) was like 4 month old. May be because of my work, I still do my normal duties".*

Women may believe that they cannot afford the "luxury" of taking time out to visit a health centre or to have a period of incapacity because this would represent time and effort lost to other essential, and possibly more important, activities such as making money, child care, and paid employment (AbouZahr 1994; Bhattacharyya and Hati 1995, as cited by Kitts, and Roberts, 1996). For instance, a pepper seller made the following statement;

*I sell pepper, rest for what, is it not us that is looking for money is only when the day is not market day, maybe I can rest, apart from that my pepper will even spoil. I don't normally eat at home because from morning till night am in the market so I buy food from sellers around.*

Working conditions appear to affect maternal health. Housewives who were preoccupied with only house chores, for example, reported good maternal health (10.9%) and entrepreneurs or owners of establishment equally reported good maternal health (44.9%). Women in employment of private or government establishments who combined house chores with official assignments reported poorer maternal health (34.1%) when compared with other categories mentioned earlier. There are categories of jobs that posed more danger to pregnant women, for example marketers reported highest poor maternal health when compared to women that owned their businesses. Bankers, hawkers and casual workers reported poor maternal health. This may be attributable to the nature of their jobs and rigours involved in carrying out their activities. The relationship with boss as a measure of role conflict is also a determinant of maternal health. Women who cited good relationship with their bosses reported good maternal health.

The finding of the forth hypothesis indicated a negative significant influence of women's working conditions on maternal health. While working has many health benefits especially for pregnant and nursing mothers, hazardous working conditions, particularly for those in manual or unskilled jobs, or less secure and low paid jobs can have adverse effects on maternal health. These can be direct hazards that arise from the physical environment or indirect hazards associated with job insecurity, low pay or limited access to pensions or career progression. Discrimination against pregnant women was reported to be prevalent in earlier studies and this represented a large portion of claims brought against employers by women. One of the major factors influencing women's labour force participation is economic necessity (Fadayomi, 1991). With their peculiar role in the family the tendency for them to be prone to maternal health challenges increases. This is largely due to a combination of factors such as lack of rest, excessive work and other forms of stress. The urban situation in Lagos further makes the situation worse. The combination of poorly planned cities, poor state of roads amidst rapidly increasing traffic volumes, and ineffective law enforcement contribute to the increasing burden of pregnant women's working conditions in Lagos state. Working policies require early resumption to work. With the traffic situation, a pregnant woman

wakes up as early as 4 am to avoid getting to the office late due to heavy traffic. Also, she would return home late because of the same traffic. The following statement was given by one of the in-depth interview respondents:

*You need to understand the traffic situation in Lagos. If you miss or you are late for 5 minutes it can cost you 4 hours on the road. That is why I leave home as early as 5am to work.*

Similarly, another respondent noted that:

*I am 24 year old. I went to primary school, and a fruit seller. Sometimes I need to go very early to the fruit market in Ketu to get better ones. I came here to stay with my mother in-law to take care of me. At the fifth month into pregnancy I was very sick. I had a threat of abortion. They told me it was because I was not resting well.*

This finding supports by Mordi and Ojo (2011) finding on work life balance. The work suggested flexible working arrangement for workers. The emerging evidence underscores the need to pay more attention to pregnant women's working hours. Most women continue to go to work until the day of delivery. The respondents continue to work due to various reasons indicated on the table. Some enjoyed half salary during the period of maternity leave which they would like to avoid. To some, starting leave early means resuming early too after delivery. Although women expressed dissatisfaction with the working conditions in Lagos state, they were less likely to report any intentions to stop working because they need the work for economic buoyancy and independence.

Working during pregnancy is not in and of itself a risk. But women around the world continue to face considerable maternity-related threats to their health and economic security. Women continue to face dismissal and discrimination in hiring on the basis of maternity. Workplace environments can pose hazards (e.g. exposure to pesticides, solvents and other chemicals); requirements of physically demanding work (e.g. heavy lifting); and irregular or long working hours: all can have potentially negative effects for the health of pregnant women and their fetuses, including greater risks of preeclampsia and hypertension, complications during pregnancy, miscarriage and stillbirth, fetal growth retardation, premature birth and other problems.

As stated by Salihu, Myers and August (2012), the importance of paid work in the lives of so many makes the quality of working conditions paramount to the reproductive health of women as well as men. Indeed, poor working conditions such as low wages, long working hours and lack of adequate weekly and annual rest in addition to unhealthy and hazardous workplaces and lack of social protection, can have negative effects on maternal health. In addition, discrimination based on gender often passed on from generations by cultural stereotypes and economic, social and political norms has also multiple adverse consequences on access to maternal health. Gender discrimination at work, constraining women's earning capacity, is particularly prejudicial. In general, standard working conditions presented little hazard to infant health; however, pregnancy could significantly impact a mother's psychosocial well-being in the workplace (Salihu, Myers and August, 2012).

The finding of the fifth hypothesis revealed that there is a significant relationship between social support available to women and maternal health. Social support refers to the emotional, practical or functional aspects of interpersonal relationships (Israel *et al*, 2002; Stansfeld, 2006). It is the advice, love, help, resources, information and empathy women give and receive among family and friends. The link between social networks/supports and maternal health has increasingly been recognized by public health as an important topic of interest. Kodzi *et al* (2010) and Koenig *et al* (2001) studied and also reviewed several studies examining the relationship between social support and health and found a predominantly positive association. This present finding indicates how maternal health can be understood in the context of social networks, the influence of specific social relationships, and how the type and quality of support can mediate maternal health outcomes.

It was also discovered that, women who are experiencing unpleasant marital dissatisfaction can also reduce the support they get from their husbands during pregnancy. As the findings show, 30.1% of respondents feel that the pregnancy happens at the wrong time. Women that get into marriage illegally may lack conjugal harmony, which can have a sort of pressure on them. Thus, when they move into the marriage and

are confronted by a different reality, dissatisfaction may arise. In fact, a woman said she would not support girls to be too engrossed with love and forget to marry properly before packing into the man's house. When asked why she would not support such a situation, she said:

*I am a victim of that, I got pregnant for him and moved to his house and now am facing the trouble. I didn't even know that He had a wife before. I have to work hard to sustain myself.*

Furthermore, this finding is consistent with the literature. For instance, Israel, *et al* (2002) found that a number of emotional supports have a significant effect over and above the effect of stressors. Moreover, the literature has emphasized the importance of strong social supports. Strong social supports have influence on health outcomes. There is considerable evidence in the medical literature about the positive effects of community and individual social capital as well as social interaction on various measures of health and well-being (Kodzi *et al*, 2010).

## **CHAPTER 5**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.0 INTRODUCTION**

This study set out to examine the socio-cultural context of pregnant women and how it affects issues of morbidity and mortality. This chapter focuses on the summary of the work, conclusion and recommendations.

The study was designed to generate knowledge on the influence of socio-cultural factors of maternal health complications. Both quantitative and qualitative research approaches were employed independently and complementarily. These involved the use of structured questionnaire, key informant interviews and case studies for data collection. The study population comprises women ages 15-49 years.

Descriptive and inferential statistical methods were used to analyze the quantitative data. The copies of the questionnaires retrieved were processed, and the data were analyzed for theme and relationship using the Statistical Package for Social Sciences (SPSS 16) software. First, the characteristics of the study sample were described using univariate analyses (frequency distributions and simple percentages) and the patterns of relationships were determined using cross tabulation. Also, the multivariate logistic regression analyses were performed to test the hypotheses in order to estimate the relative influence of the independent variables on maternal health.

The tapes and notes from the key informant interviews were analyzed and common responses were identified for each topic included in the interview guide. Responses to each topic were summarized and important quotations were reported verbatim to highlight common individual views. On the other hand, the case histories that were generated were subjected to in-depth content analysis. Common themes were identified while an overarching storyline was developed for the purpose of telling a “common story” about mothers’ experiences and how those experiences influence maternal health.

## **5.1 Summary of Findings**

This research was carried out in four Local Government Areas of Lagos State, which are Alimosho, Ikorodu, Ibeju Lekki and Lagos Island LGAs. The finding shows that the four LGAs randomly selected were proportionately covered in selection of sample.

The age characteristic revealed mean age of the women surveyed was 30.8 years. The youngest woman in the sample was 17 years while the oldest was 41 years old. The age distribution revealed that women continue childbearing until their late 40s. The distribution of the respondents by marital status shows that 10.1% of the respondents were without husband. The implication of the marital status distribution is that women still found themselves either taking care of their pregnancy or children alone as single mothers, widows or divorcees. Education appeared as an important factor that precipitates the medical proximate and maternal health. Women without formal education appeared to ignore or delayed antenatal while as level increases the probability of attending antenatal equally improved. While, ample of women engaged in petty trading, low income was associated with delayed antenatal attendance.

The findings show a fair attendance of antenatal care. However, women delay antenatal till the forth and above month of pregnancy or later. Other intervening factors, rather than just education and income might be significantly militating against maternal wellbeing that need to be considered to ensure maternal health and prevent complications. There is ample evidence that the critical economic situation of women is a factor that has prevented a significant proportion of women from paying prompt and adequate attention to their health care during pregnancy. Most women rely on petty trading as their main source of income and would not attend to their health because of economic activities. On the other hand, low level of education affects the rationality and sensitivities of the women to the demand of pregnancy, thereby resulting in ineffective health decision. As such, late attendance of antenatal results to late detection of possible complications. Therefore, women often face many health hazards which sometimes induce morbidity or even death.

This finding is in consonance with what is in the literature that the precarious conditions and unsatisfied needs regarding the health of women is at the root of maternal health (Camarena and Lerner, 2005). This is not surprising since women comprise population groups living in extremely poor and less developed contexts. This is the case of pregnant women who live in social, cultural and institutional contexts where they have fewer opportunities of access to education, and have experienced the greatest gender and power inequity relations. These women live in circumstances of weak reproductive health policy, where programmes are implemented with political and medical rationale, without taking into account the specific economic, social and cultural conditions and needs of the various populations or groups.

The association of cultural beliefs and stereotypes with maternal health complications was examined. The findings show that cultural beliefs and stereotypes affect maternal health. The beliefs and stereotypes of pregnancy significantly account for delay in antenatal attendance and frequency of hospital visits for self-reporting cases.

This study also investigates role conflict influence on maternal health. All indicators showed that this has negative association with maternal health. Significant differences based on occupation were observed. Women displayed their feelings of difficulties in fulfilling incompatible role obligations while carrying fetus which in itself adds pressure to the body at that period. In addition to this, some of the working conditions were found to be negatively related to maternal health complications. This may be attributable to the nature of their jobs and rigours involved in carrying out their activities.

The study further demonstrates that strong social networks and support mechanisms enhance maternal health. For instance, positive association was observed between husbands' and relatives' support and maternal health. Pregnant women in families where social support is not available experience problems or have more difficulties coping.



## 5.2 Conclusion

In conclusion, this study has shown that maternal health challenges will continue to shape national indicators on health, poverty, and other development issues, if adequate attention is not provided. The study has highlighted the needs and uncertainties in some critical aspects of maternal health and suggested the paths to follow. The potentials of the maternal health approach to achieving a better understanding and, above all, for policy purposes, in order to respond to maternal health needs of individuals and the nation as a whole is still an urgent task that must be undertaken.

This study has also revealed that social cultural risk factors of maternal health cluster together and are mutually reinforcing. Hence it has become problematic to attempt to develop a single description of the situation of women. It is imperative to also consider the two-way nature of many of the possible relations observed. For instance, despite the relatively massive emphasis and expansion of maternal health care services, maternal health challenges prevail. The complexity of the nature of maternal health means that solutions need to be equally complex. Maternal health complication does not just have one model of causes, so government's effort to reduce maternal mortality and morbidity must focus on the various dimensions of social causes of maternal health complications. Understanding the influences is crucial to improving maternal health.

While urban environments provide many economic opportunities, they are also complex and intimidating social and physical environments. Because of the disruptive social circumstances, current medical interventions are not effective enough to reduce maternal mortality and morbidity. This is why the social, economic and cultural context should be seen as an important source of complications requiring means/ways of intervention.

The study revealed the need for practical and sustainable development which could help push this country out of its plague of high maternal mortality rate as it is done in developed countries and the emerging middle-income countries around the globe. It was evident from the study that, the achievement of MDGs and vision 20-20-20 would be a

mirage if the current poor planning, poor infrastructure and basic amenities, growing poverty and deteriorating health outcomes are not forcefully and sustainably addressed.

The study successfully identified some of the critical aspects of maternal health complications in Lagos State. The risk factors were identified and they include age, educational level, economic situation/status, cultural belief and stereotypes, role conflicts, working conditions and social supports. All these variables are significantly related to the well being of mothers during pregnancy. Furthermore, economic status of mothers, which is also, a function of education if found to be the greatest predictor of maternal health complications. This means that a woman who is highly educated does not face economic pressure and is better able to be on top of these social factors than a woman who is under economic pressure. The lesson that can therefore be drawn from this point is that if maternal health is to improve, operational intervention must be design for education, economic situation and other social circumstances of women. In this regard therefore, proper education, poverty reduction social infrastructural developments are germane to maternal health.

### **5.3 Recommendations**

1. As it had been revealed in this study, the socio-cultural factors cluster together to influence maternal health. Therefore, establishing the link between maternal health and socio-cultural context must begin by dealing with the issues of maternal health in a broad, multidimensional way. This should be by not restricting the analysis of maternal health to hospital care services, such as attendance of antenatal care, provision of Emergency Obstetrics Care (EOC) alone. Policy effort should require the development of indicators of institutional, cultural and social conditions that generate and express basic needs and unmet needs related to the quality of maternal health in society. As proposed by functionalism, under normal conditions, the various parts of society work together toward shared goals, producing order, stability, and equilibrium. Viewed from this perspective, conflict is a symptom of “disease” in the social organism (Gelles and Levine, 1995). Therefore, special emphasis must be placed

on new and contemporary forms of vulnerability associated with the reorganization and de-structuring of the economy.

2. The fact that working conditions is negatively related to maternal health complication, called for urgent policy intervention. Employers must realize that they have a social responsibility to address the issue of maternal health complications. In particular, there should be targeted health policies toward maternal wellbeing during pregnancy in the working place. This could be developed in the light of urban poor infrastructure and the double pressure which the body experiences during pregnancy. Policies establishing flexible working hour for pregnant women, such as closing earlier than others to avoid the pressure on the road and to be able to attend to home activities, also for them to have enough time to prepare and rest for the next day activities can be established. This is to enhance protective factors, as well as buffering and moderating risk factors identified in this study.
3. Entrenchment of social security for pregnant women is quite essential for the improvement in maternal health. Apparent low standard of living during pregnancy due to economic crunch appeared to be an indication for engagement in tedious economic activities during pregnancy. This can result into irregular pattern of food intake necessary to sustain the body during pregnancy. Therefore, every effort must be in place to reduce effect of poverty. Improving living conditions in such areas as good road net work, provision of other infrastructure, income, housing, transportation, education, social support, and health services, will greatly impact on the wellbeing of pregnant women, thereby reducing the level of stress in raising the family economic status. Any attempt at establishing health sector reforms without first addressing the important issue of improving the state of the enabling factors for better health in a country is likely to be an unsuccessful attempt. Also, public assistance programmes, though not always sufficient, must be available for the pregnant women to augment their resource and encourage them to pay more attention to their health.

4. Preconceived ideas about pregnancy should be discouraged by the use of health promotion and education. It is found that women because of their notion on pregnancies attend antenatal but not early into their pregnancy, and therefore, most women miss out of intended benefits of preventing adverse pregnancy outcome with early antenatal care. Consequently, women should be educated on pregnancy complications and the need for timely referral. The ripple effect of women's education on maternal health care highlights the need for programmes that promote greater schooling for girls' population. Therefore, government must intensify efforts to ensure the future generations are educated. Also, while most careers require the learning of certain subjects, attention should be given to one of the important roles they are likely to play as a woman. Broad-based educational activities addressing out-of-school adolescents, the market women are also needed. The importance of these educational programmes lies in their ability to help increase ability to think critically and analyze situations and develop positive intentions.
5. Women double roles appear to have negative influence on maternal health. Given the scarcity of resources which lead to women's involvement in economic activities, increased attention should be given to the strengthening of natural social support system to assist women during pregnancy. However, in a bid to providing more social supports to women during pregnancy, the problem needs to be addressed from structural dimension; women alone are not responsible for pregnancy; men's responsibility in such situations also must be addressed. Therefore, this study calls for enlightenment and the education of men on maternal health complications and promotion of men support for their wives during pregnancy as a way of enhancing maternal health outcomes among pregnant women.
6. Addressing many commonly held attitudes and behaviours, like gender roles, and other cultural beliefs that are inimical to health are cultural issues, which can be achieved through community-based programmes. Health promotion and

education as a primary prevention approach will create opportunity for easier communication, dealing with the dynamics of knowledge, power and decision making process in the family, as part of the effort to ensuring good health during pregnancy.

7. There is need to improve the implementation of public health interventions in terms of both coverage and effectiveness, to provide prompt and adequate medical attention and referral when it is needed. Also, service providers need constant training and support to provide sensitive Emergency Obstetric Care. Improvements are needed in the quality of care in the country, and particularly in reproductive health. Attention is required also, in demand issues, which include identification of limitations on women's capacity to seek health care when complications arise.
8. Finally, there must be strong political will on the part of government at all levels that will help in reducing maternal mortality in Nigeria.

#### **4.4 Contribution of the Study to Body of Knowledge**

This research is an attempt to extend our knowledge and understanding of the socio-cultural risk factors that precipitate the medical proximate determinants of maternal morbidity and mortality in Nigeria. The value of this research is anchored on its seeming simplicity, and it focuses on those factors that biomedical researchers have overlooked and which medical sociologists have discussed in a cursory fashion. The underlying premise of undertaking this study is the conviction that the overall effect of these "little foxes" is overwhelming and they significantly impact on maternal morbidity and mortality.

While this study acknowledges the importance of biological factors and health care utilization in the reduction of maternal mortality and morbidity, the focus of the research will help to chart a new understanding of maternal health within a socio-cultural framework.

This study adds to the body of knowledge, particularly in its application to pregnant women in the poor urban neighbourhoods.

1. The study has generated some pertinent questions regarding maternal health, which registered a new insight and direction to the body of literature. Such as;
  - a. What social factors precipitate medical risk factors that affect maternal health?
  - b. How does role conflict and working conditions influence maternal health complications?
2. The study revealed the maternal health circumstances in urban centre, and this enlightened the reader contrary to the expectation that all is rosy in urban health.
3. The study presented prospects for fundamental social, institutional and emotional support benefits for pregnant women. It revealed those unseen difficulties that women experience during pregnancy.
4. The study has also brought to the fore the connection between health and level of development and challenge the government on development issues.
5. The influences of biomedical model of health in bridging the gap in maternal health have been identified. Quick Emergency Obstetrics Care service intervention is very important to reduction in maternal mortality rate.
6. Finally, the study has provided data on the socio-cultural context of maternal health challenges in Lagos State and in Nigeria as a whole. This brought to the fore the intrigue influence of neglected seemingly trivial factors that affect the health of the pregnant women which could be used for programme intervention.

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## APPENDIX I: QUESTIONNAIRE SCHEDULE

Good day,

I am a postgraduate student of Covenant University. I am conducting a research on maternal health for my dissertation which is a requirement for the award of a doctorate degree in the above named department. I will therefore appreciate your honest participation in this research. May I assure you that any information you provide will be handled with the strictest confidentiality and will be used only for academic purposes.

Thank you.

Adenike Idowu

### Section A- Socio-Demographic Background

1. What was your age as at last birth day? .....
2. Marital Status: (1) Single (2) Married (3) Divorced (4) Widowed (5) Cohabiting (6) Separated
3. What is your religion? (1) Christianity (2) Islam (3) Traditional (4) Free thinker (5) Other, pls. specify.....
4. What is your highest educational attainment? (1) No Formal Schooling (2) Primary (3) Secondary (4) Tertiary (5) Other, please specify.....
5. What do you do for a living? (1) Petty trading (2) Farming (3) Civil servant (4) House wife (5) Unemployed (6) Other, please specify.....
6. In your estimate, how much do you get as income per month.....

7. What type of marriage contract do you have? 1) Customary (2) Church (3) Mosque (4) Civil/Legal (5) Consensual (6) None (7) Other, please specify.....
8. What was your age at marriage? .....
9. How many wives does your husband have? .....
10. What is your position among your husband's wives? .....

### **Section B- Partner's Socio-Demographic Background**

11. How old was your Spouse/Partner as at his last birth day? .....
12. What is his highest educational attainment? (1) No Formal Schooling (2) Primary (3) Secondary (4) Tertiary (5) Other, please specify.....
13. What is your spouse's/partner's religion? (1) Christianity (2) Islam (3) Traditional (4) Free thinker (5) Other, please specify.....
14. What is your spouse's/partner's occupation? (1) Petty trading (2) Farming (3) Civil servant (4) Artisanship (5) Unemployed (6) Other, please specify.....
15. What would you say is your husband's/partner's estimated income per month? .....

### **Section C- Reproductive History**

16. Have you ever given birth? (1) No (2)Yes
17. If yes, to question 16, how old were you when you had your first child? -----
18. How many times have you given birth? -----
19. Have you ever had any miscarriage? (1) No (2)Yes
20. If yes to question 19, how many times? -----
21. What would you say caused the miscarriage? .....

22. How many children do you have? .....
23. Are they all alive? (1) No (2) Yes
24. If No, to question 23, what caused their death? (1) Sickness (2) Still Birth (3) Other.....
25. Where did you give birth to your last child?
- (1) Health clinic (2) Traditional Birth Attendant (3) Spiritual home (4) Home
26. Why did you choose to use the option above? .....
27. Did you go for antenatal care when you were pregnant? (1) No (2) Yes
28. If yes, where did you have your antenatal care? (tick as many as applicable) (1) Health clinic (2) Traditional Birth Attendant (3) Spiritual home (4) Chemist/medicine store (5) Home /self
29. Why did you choose to use the option above? .....
30. And if No to question 28, why? (1) No money (2) Non availability of health centre (3) Inadequate care in health centres (4) There is no need for it (5) Other, please specify.....
31. How many weeks or months pregnant were you when you had your first prenatal care visit? .....weeks or ..... Months (2) I never had
32. How far is the health centre from your house in K/m? .....
33. Does your husband/partner give you money for antenatal treatment? (1) No (2) Yes (3) Not enough
34. Have you ever had any health complication during pregnancy? (1) No (2) Yes
35. If yes to question 34, please tick as many as are applicable.



Headache . . . . .	A
Blurry Vision . . . . .	B
Pre-Eclamsia . . . . .	C
Excessive Bleeding . . . . .	D
Convulsions/Eclamsia . . . . .	E
Sepsis . . . . .	F
Foul-Smell/Vaginal Discharge . . . . .	G
Baby Movement was low . . . . .	H
Baby's Hands/Feet came out first . . . . .	I
Prolonged Labour . . . . .	J
Obstructed Labour . . . . .	K
Torn Uterus . . . . .	L
Placenta Previa . . . . .	M
High Fever . . . . .	N
Fistula . . . . .	O

36. Where did you receive treatment for the above complication? (1) Health clinic  
(2) Traditional Birth Attendant (3) Place of worship (4) Home (5) Friends
37. I feel my pregnancy happened at the: (1) Right time (2) Ok, but not quite the  
right time (3) The wrong time
38. Just before I became pregnant; (1) I intended to get pregnant (2) My intentions  
kept changing (3) I did not intend to get pregnant.
39. How did you feel when you found out you really were pregnant? (1) Very happy  
(2) Somewhat happy (3) Somewhat unhappy (4) Very unhappy (5) I wasn't sure  
how I felt.
40. Do you still want to have more children? (1) No (2) Yes
41. If yes to question 40, why? (1) My husband wants more (2) The family wants  
more (3) I want more
42. Who decides whether you go for family planning (to stop/space child bearing or  
not)? (1) My husband (2) We both decide (3) It is God that gives children

### **Section D- Working Conditions**

43. What is your position in your place of work? . . . . .
44. What is the nature of your work? . . . . .
45. How is your relationship with your boss? (1) Good (2) Fair (3) Not good
46. At what time do you leave home for work? . . . . .
47. At what time do you normally return home from work? . . . . .
48. How far is your place of work from where you live, in k/m? . . . . .
49. How long does it take on the average, to get to your place of work?  
.....
50. What is your means of transportation to your place of work? (1) official/private  
car (2) Public transport (3) Other . . . . .
51. At what stage of pregnancy do you apply/stop going to work for maternity leave?  
(1) 1-2week to delivery (2) A month (3) Delivered and sent application letter (4)  
Other .....
52. Based on question 51, Why?
53. How long does your maternity leave last? (1) 1 month (2) 2 months (3) 3 months  
(4) other (please specify).....

### **Section E – Role Conflict**

54. Do you do your normal house chores when you are pregnant? (1) No (2)Yes
55. When you are pregnant do you usually have problem carrying out your house  
chores? (1) No (2) Yes
56. When you are pregnant do you usually have problem cooking because of your  
work? (1) No (2) Yes

57. When you are pregnant do you usually have problem washing because of work?  
(1) No (2) Yes
58. When you are pregnant do you usually have problem going to the market for shopping because of work? (1) No (2) Yes
59. Does your husband normally help you with the house chores when you are pregnant? (1) No (2) Yes
60. Is any member of your extended family living with you? (1) No (2) Yes
61. If yes, how many of them? .....
62. If yes, how old is the oldest person? .....
63. What is the relationship of that person to you? .....
64. Do you have time to rest? (1) No (2) Yes
65. If No, what do you think is the reason for not having time to rest and take care of yourself? .....
66. Besides your night sleep, how many hours do you have to rest? (1) Less than 1 hour (2) Above 1 hour

#### **Section F- Social Support**

67. Are you living together with your husband? (1) No (2) Yes
68. Do you share the same room with your husband? (1) No (2) Yes
69. If No why? .....
70. Does your husband normally help you with the house chores when you are pregnant? (1) No (2) Yes
71. Before I became pregnant: (1) My partner and I agreed that I should be pregnant.  
(2) We never discussed having children together.

72. During your last pregnancy, did you have someone you could turn to if you needed practical help, like getting a ride somewhere, or help with shopping or cooking a meal? (1) No (2) Yes

73. During your last pregnancy, did your mother in-law/relative come to give you support? (1) No (2) Yes

74. During your last pregnancy, did you have someone you could turn to if you needed someone to comfort or listen to you? (1) No (2) Yes

75. If the need arises, do your colleagues help to do your duties? (1) No (2) Yes

### **Section G - Cultural Beliefs and Stereotypes**

76. Do you believe in going to Mission home or Alfa when you are pregnant?  
(1) No (2) Yes

77. If yes to question 76, why? .....

78. If No to question 76, please give reasons. ....

79. Do you have cultural/traditional practices you observe during pregnancy (such as not eating some foods, what you cannot do etc)?. Pls. list them;  
i.....ii.....  
iii.....

80. What are those feelings/conditions that you think are normal to experience during pregnancy? Tick as many as applicable. (1) Swollen leg (2) Dizziness (3) Fatigue (4) Other, please specify.....

81. While you were experiencing those condition(s) did you seek medical attention?  
(1) No (2) Yes

82. If No, why? .....

### **Food and Money during Pregnancy**

83. I couldn't afford to eat balanced meals. (1) Often true (2) Sometimes true (3) Never true
84. During your pregnancy, did you skip meals because there wasn't enough money for food? (1) No (2) Yes
85. How often did this happen? (1) Very often (2) Sometimes
86. During your pregnancy, did you ever eat less than you felt you should because there wasn't enough money to buy food? (1) No (2) Yes
87. During your pregnancy, were you ever hungry but didn't eat because you couldn't afford enough food? (1) No (2) Yes

### **Life style**

88. Just before you got pregnant, were you taking multivitamins or folic acid in preparation for the pregnancy? (1) Yes, I took them every day or almost every day. (2) Yes, I took them sometimes. (3) No, I never took multivitamins or folic acid.
89. During your pregnancy, about how many drinks with alcohol did you have in an average week? (1) I didn't drink at all. (2) Less than one drink per week. (3) 1 to 3 per week. (4) 4 or more drinks per day.
90. Have you smoked any cigarettes in the past 2 years? (1) No (2) Yes
91. If yes, to question 90, during the early months of your pregnancy, how many cigarettes or packs of cigarettes did you smoke? (1) Less than 1 pack a day. (2) I didn't smoke at all during my pregnancy.
92. In your opinion, why do think women have complications in pregnancy? ....
93. In general, how is your health? (1) Excellent (2) Good (3) Average (4) Poor

## **APPENDIX II: KEY INFORMANT INTERVIEW GUIDE (For Medical Practitioners)**

### **Introduction**

Good day Sir/Ma. My name is Adenike Idowu. I am currently conducting social health survey on maternal health challenges I will be grateful if you could participate by granting me audience. Information you supplied would be use for academic purpose and will be treated with utmost confidentiality.

1. What is your specialization?
2. What common pregnancy related complications do you handle?
3. Which of these problems that you mentioned would you say is commonly reported in this clinic/hospital?
4. What are the causes of these complications?
5. Why are women susceptible to these complications?
6. How would you describe the characteristics of those who are suffering from these complications?
7. How can we reduce women susceptibility to these complications?

Thank you.

### **APPENDIX III: KEY INFORMANT INTERVIEW GUIDE (For Women Ages 15-49)**

Category of participants: women

Age of participants 15-49

- Introduction , explanation of the purpose of the study
- Explain that the tape recorder will be needed but, that the information will be kept confidential and used only for the study.
- There are no right and wrong answers.
- Drop the unit about incentives for the participants. Thank the respondent for her time.

#### **Pregnancy Experience**

- At what age did you get married?
- Can you please tell me what life is like as a pregnant woman?
- How many children do you have? Have you had any miscarriage?
- Why?
- Did you go for antenatal?
- Where did you go to? And why?
- Where did you give birth?
- What type of health challenge do you normally have during pregnancy?
- And what do you do to treat yourself?

#### **Working Experience**

- In your working place, are you permitted to go for ante natal clinic?
- Do you still resume and close the same time?
- Is there any other policy that is gear toward save pregnancy in your organization?

#### **Social Support**

- Did your husband/partner support you?
- How?

- Can you tell your husband/partner how you are feeling or what you need when you are pregnant?
- How does your belief influence what you do when you are pregnant?
- What are the cultural/ traditional practices you are to observe during pregnancy?
- What are the foods you are to or not to eat when you are pregnant?
- What role do extended family members play in your home (when you are pregnant)?
- Do your in-laws influence what happen in your home concerning your health?

### **Role Conflicts**

- When you are not pregnant, what is your typical daily routine like?
- When you are pregnant, what is your typical daily routine like? (follow up questions of why, how, when etc)
- When you are not pregnant, what is your typical regular food menu?
- When you are pregnant, what is your typical regular food menu?



## APPENDIX IV: MATERNAL MORTALITY RATE IN LAGOS STATE



### THE CAMPAIGN AGAINST UNWANTED PREGNANCY

36B, Olu-Akerole Street, Off Koloworola Crescent, Off Obafemi Awolowo Way, Ikeja, P. O. Box 9373 - Marina, Lagos, Nigeria  
Telephone: +234 -1- 471 0587, +234 -1- 791 7086 and +234 -1- 470 4976 e-Fax: +1 - 309 285 5151

Friday, 27 August 2010.

**Dr. Jide IDRIS**  
Honourable Commissioner for Health,  
Lagos State Ministry of Health,  
Lagos State Secretariat, Alausa, Lagos State.

Dear Sir,



Dr. Jide IDRIS,  
For your  
retention pl  
14/9/10

#### Results of 2010 Maternal Mortality Study in all the 20 Local Government Areas (LGAs) of Lagos State, NIGERIA.

S/N	Local Government Areas (LGAs)	Maternal Mortality Ratio (MMR)
1.	Agege	667 per 100,000 Live births
2.	Ajeromi / Ifeodun	736 per 100,000 Live births
3.	Alimosho	826 per 100,000 Live births
**4.	Amuwo - Odofin**	555 per 100,000 Live births
*5.	Apapa*	421 per 100,000 Live births
6.	Badagry	600 per 100,000 Live births
7.	Epe	803 per 100,000 Live births
8.	Eti-Osa	725 per 100,000 Live births
9.	Ibeju-Lekki	690 per 100,000 Live births
10.	Ibeja-Lekki	758 per 100,000 Live births
*11.	Ibeja*	354 per 100,000 Live births
12.	Ikorodu	754 per 100,000 Live births
*13.	Kosofe*	421 per 100,000 Live births
*14.	Lagos Island*	310 per 100,000 Live births
*15.	Lagos Mainland*	443 per 100,000 Live births
*16.	Mushin*	511 per 100,000 Live births
17.	Ojo	667 per 100,000 Live births
*18.	Oshodi-Isoto*	443 per 100,000 Live births
19.	Shomolu	667 per 100,000 Live births
*20.	Surulere*	332 per 100,000 Live births

RECEIVED 27/8/10  
DATE P...  
Shodango  
14/9/10  
3:45

2008 MMR for Nigeria – 545 per 100,000 Live births (2008 DHS).  
2008 MMR for Lagos State – 450 per 100,000 Live births (Pilot Study by The CAUP).  
2010 MMR for Lagos State – 555 per 100,000 Live births (Present Study).

\*Below Lagos State Maternal Mortality Ratio.  
\*\*Amuwo - Odofin's figure is on the same level with the Lagos State Maternal Mortality Ratio.  
Lagos Island LGA has the lowest MMR ratio of 310 per 100,000 Live births.  
Alimosho LGA has the highest MMR ratio of 826 per 100,000 Live births.

Yours faithfully,

**Dr. Boniface A. OYE-ADENIRAN**, FRACS, FRCOG, msc.  
Principal Investigator,  
Chairman, The CAUP Board of Directors,  
Consultant Obstetrician & Gynaecologist  
Mobile: 0803 718 3706 E-mail: bonifaceoye@yahoo.com

E-mail: spolagos@gmail.com  
spolagos@yahoo.com

**APPENDIX V: LIST OF STATE-OWNED HEALTH INSTITUTIONS AND REGISTERED PRIVATE HEALTH FACILITIES IN LAGOS STATE**

LIST OF STATE-OWNED HEALTH INSTITUTIONS AND REGISTERED PRIVATE HEALTH FACILITIES IN THE STATE

S/N	Name of LGA	No of Public HFs	No of Private HFs***		General Hospitals**	Teaching Hospital*
			Hospitals	Clinics		
1	Agege	9	48	30	1	
2	Ajeromi Ifelodun	6	52	24	1	
3	Alimosho	29	115	60	1	
4	Amuwo Odofin	8	37	15	0	
5	Apapa	7	27	14	1	
6	Badagry	17	15	5	1	
7	Epe	17	1	5	2	
8	Eti Osa	17	54	42	0	
9	Ibeju Lekki	24	5	0	1	
10	Ifako Ijaiye	12	27	18	1	
11	Ikeja	13	76	46	0	1
12	Ikorodu	20	31	40	3	
13	Kosofe	10	53	39	1	
14	Lagos Island	9	21	47	4	
15	Lagos Mainland	10	23	37	3	
16	Mushin	10	46	39	1	
17	Ojo	15	42	36	0	
18	Oshodi /Isolo	16	65	48	1	
19	Somolu	7	32	24	1	
20	Surulere	8	113	81	1	
	<b>Total</b>	<b>264</b>	<b>883</b>	<b>650</b>	<b>24</b>	<b>1</b>

\*State-owned Teaching Hospital.

\*\*State-owned GHs.

\*\*\* Registered Private HFs with HEFAAMA.

# APPENDIX VI: POPULATION FIGURE OF LAGOS STATE BY LGAs

S/NO	LOCAL GOVERNMENT AREA	2006 POPULATION			2007	2008	2009	2010
		Male	Female	Total				
1	AGEGE	564,239	468,825	1,033,064	1,066,122	1,100,238	1,135,446	1,171,780
2	AJEROMI/IFELODUN	723,644	711,651	1,435,295	1,481,224	1,528,624	1,577,540	1,628,021
3	ALIMOSHO	1,099,656	947,370	2,047,026	2,112,531	2,180,132	2,249,896	2,321,893
4	AMUWO/ODOFIN	301,012	223,959	524,971	541,770	559,107	576,998	595,462
5	APAPA	264,728	257,656	522,384	539,100	556,351	574,155	592,528
6	BADAGRY	187,427	192,993	380,420	392,593	405,156	418,121	431,501
7	EPE	153,360	170,274	323,634	333,990	344,678	355,708	367,090
8	ETI-OSA	460,124	523,391	983,515	1,014,987	1,047,467	1,080,986	1,115,578
9	IBEJU-LEKKI	49,613	49,927	99,540	102,725	106,012	109,405	112,906
10	IFAKO/IJAIYE	380,112	364,211	744,323	768,141	792,722	818,089	844,268
11	IKEJA	328,778	319,942	648,720	669,479	690,902	713,011	735,828
12	IKORODU	364,207	324,838	689,045	711,094	733,849	757,333	781,567
13	KOSOFE	527,539	407,075	934,614	964,522	995,386	1,027,239	1,060,110
14	LAGOS/ISLAND	461,830	398,019	859,849	887,364	915,760	945,064	975,306
15	LAGOS/MAINLAND	326,433	303,036	629,469	649,612	670,400	691,852	713,992
16	MUSHIN	684,176	637,341	1,321,517	1,363,806	1,407,447	1,452,486	1,498,965
17	OJO	507,693	433,830	941,523	971,652	1,002,745	1,034,832	1,067,947
18	OSHODI/ISOLO	514,857	619,691	1,134,548	1,170,854	1,208,321	1,246,987	1,286,891
19	SHOMOLU	517,210	507,913	1,025,123	1,057,927	1,091,781	1,126,718	1,162,773
20	SURULERE	698,403	575,959	1,274,362	1,315,142	1,357,226	1,400,657	1,445,478
	<b>TOTAL</b>	<b>9,115,041</b>	<b>8,437,901</b>	<b>17,552,942</b>	<b>18,114,636</b>	<b>18,694,305</b>	<b>19,292,522</b>	<b>19,909,883</b>



## APPENDIX VII: PHOTOGRAPH SECTION



The researcher with one of the field assistants numbering the questionnaire administered for the day.



The researcher with one of the respondents and the assistant in Ibeju Lekki



The Researcher (right) in an interview session





Economic activities in Lagos Island market



A Pregnant woman, with a baby at the back and another child following her.



Pregnant woman hawking in the sun in Alimosho Area



The researcher in Lagos Island Maternity Hospital



The researcher in General Hospital in Ikorodu